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How Fair is Fair-Share?

A Longitudinal Assessment of California's Housing Element Law

A thesis submitted in partial satisfaction

of the requirements for the degree

Master of Urban and Regional Planning

by

Shine Ling

2018

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2018

ABSTRACT OF THE THESIS

How Fair is Fair-Share?

A Longitudinal Assessment of California's Housing Element Law

by

Shine Ling

Master of Urban and Regional Planning

University of California, Los Angeles, 2018

Professor Paavo Monkkonen, Chair

The state of California implements the Regional Housing Needs Assessment (RHNA) program as the central pillar of its statewide housing policy, the Housing Element Law. It determines “fair share” allocations of a region’s forecasted growth in households for each city and county, and directs local jurisdictions to accommodate the allocations in its general plans and zoning capacity.

The RHNA process is an attempt to ensure that additional housing units are constructed to accommodate population growth in every part of the state. However, nearly forty years since RHNA was first established, California today faces a housing crisis where vacancy rates are very low and rent and ownership prices have skyrocketed, especially in its coastal metropolitan regions (Alamo and Uhler 2015). While limited studies of the RHNA program have been conducted in the past, none have examined it from a comprehensive and longitudinal perspective.

I analyzed data on RHNA allocations and performance for the Southern California Association of Governments (SCAG), a regional Council of Governments that encompasses six counties and is the most populous in the state. Covering the period from 1998 to 2021, I found that high allocations are strongly associated with cities that have lower household incomes, more people of color, and are farther away from downtown Los Angeles. They are also associated with cities having high rates of past household growth. In contrast, housing production was associated only with past household growth and distance from downtown Los Angeles.

I conclude that SCAG's implementation of RHNA reinforces racial and economic disparities of housing growth in the region. I also find that it has a recursive effect over time, maintaining high allocations for cities on the urban fringe while rewarding slow-growth cities with low allocations. The RHNA implementation by the Association of Bay Area Governments (ABAG) displays similar dynamics of disparity (Bromfield and Moore 2017). Major changes to RHNA allocation methodologies are necessary to address these structural inequalities in California's housing landscape.

The thesis of Shine Ling is approved.

Michael C. Lens

Michael K. Manville

Paavo Monkkonen, Committee Chair

University of California, Los Angeles

2018

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Finally, a warm embrace to all of my fellow MURP cohort-mates. So many and so great you are, to name any one of you diminishes those I haven't space to name. As individuals and together, you have buoyed my spirits every day and taught me so much about cities and humanity. I am forever grateful to have shared in your company and true friendship.

CHAPTER 1

INTRODUCTION

The state of California implements the Regional Housing Needs Assessment (RHNA) program as the central pillar of its statewide housing policy, the Housing Element Law (Calif. Government Code section 65580 et seq). Using forecasts of growth in population and households, it projects the future increase in housing stock needed for each region of the state over a five-to-eight-year period. Regional councils of governments (COGs) are then responsible for determining and assigning a “fair share” of the regional allocation for each of its member cities and counties. Lastly, each city and county designates lands that are available for constructing its assigned portion of the regional allocation as part of its Housing Element, a required chapter in a city or county’s General Plan.

RHNA is the primary tool by which California directs local governments to plan for future growth and “accommodate the housing needs of Californians of all economic levels” which the state legislature deems a matter of “vital statewide importance” (Calif. Government Code section 65580). It is an elaborate technical process that involves demographers, planners, and community outreach at the state, regional, and local levels. Yet, despite nearly forty years of implementation, housing costs continue to skyrocket, especially in coastal metropolitan areas. The average home price in 2015 for San Francisco was \$952,000, which is over twice the state’s average and over five times the U. S. average (Zillow data as cited in Alamo and Uhler 2015).

Despite the central place that RHNA occupies in California’s Housing Element Law, only a few studies have examined how well RHNA works, and only from a limited scope. In 2017, the state

legislature passed a package of fifteen bills to address the current “housing affordability crisis” (Dillon 2017). In 2018, Senator Scott Wiener introduced Senate Bill 828, aimed at modifying and strengthening the requirements of RHNA that cities must follow. Conducting an in-depth, longitudinal assessment of RHNA performance can give policymakers a more complete picture and aid them in crafting a more effective planning tool.

The RHNA Process

The RHNA program is established in California’s Housing Element Law (Calif. Government Code section 65580 et seq.) and consists of three overall steps or levels. First, demographers for the State Department of Finance create forecasts of growth in population and households, and thus projects the future increase in housing units needed for each region in the state during an upcoming five-to-eight year period. This increase is the “regional assessment.” The State Department of Housing and Community Development (HCD) confers with staff from regional councils of governments (COGs) to review preliminary versions of the regional assessment before issuing a final determination.

Second, regional councils of governments (COG) then divide up the regional assessment figure among its member cities and counties. This is known as a city or county’s “RHNA allocation” of new housing units. A portion of the allocation is required to be set aside for affordable housing units (restricted to households earning less than 120% of a county’s median income).

Lastly, each city or county must designate lands to accommodate the construction of its assigned RHNA allocation. This must be documented in the Housing Element of the local jurisdiction’s General Plan. The local jurisdiction must submit its Housing Element for HCD’s certification, which examines it for compliance with Housing Element Law. Cities and counties that

do not gain certification face potential penalties such as loss of federal and state funds for affordable housing, and litigation that halts its ability to approve any new development.

Each COG has considerable latitude (under Housing Element law) to develop its own methodology for determining the allocations for its member cities and counties. Some COGs use a formula based on spatial and demographic factors, while others use a process of bottom-up voluntary pledges by their member cities to get to the overall regional assessment goal. In turn, cities and counties have complete control and much flexibility over how to accommodate their RHNA allocation of housing units. They can identify vacant lands for residential construction and/or target underutilized areas for additional density through infill development or redevelopment. As long as a local jurisdiction has demonstrated to HCD that its zoning map and regulations can feasibly accommodate its allocation, it is deemed to be in substantive compliance with the RHNA program's requirements. Since the private market is responsible for developing housing, cities and counties do not have direct control over whether units actually get built. Therefore, the RHNA program does not penalize cities for failing to construct all of the units in its RHNA allocation. In other words, the RHNA allocation is not a construction quota; instead it is a directive for creating zoning capacity to allow for potential development.

Southern California Association of Governments (SCAG)

SCAG is a regional COG that encompasses six counties in Southern California: Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. It is the largest and most populous COG in the state, covering over 38,000 square miles and about 18 million residents. There are 191 incorporated cities in the SCAG region. (SCAG n.d.).

SCAG's methodology for determining the RHNA allocations for its member cities and counties is based on its Integrated Growth Forecast, which is also used to support the development of its

Regional Transportation Plan (RTP). The Integrated Growth Forecast takes into account population growth, headship rates, and job growth. Headship rates are applied to anticipated population growth to create a projection of the number of new households expected for each jurisdiction. This serves as the primary component for determining the number of new housing units for each jurisdiction. As part of the process, Housing Element Law expects SCAG to take into account ten different local factors that may affect these formulaic forecasts of household growth and RHNA allocations (Calif. Government Code section 65584.04). These include jobs/housing relationship, constraints and opportunities on land inventory, and market considerations such as overall demand and high housing cost burdens. During the development of allocations for the 5th Cycle (for the RHNA projection period of 2013-2021), SCAG surveyed its member cities regarding these local factors but ultimately concluded that the Integrated Growth Forecast's methodology would adequately account for the factors. (SCAG 2011).

Thus, the RHNA allocations for SCAG's member cities and counties are based primarily on projected growth in the number of households. The formulaic methodology was applied to each jurisdiction in the same way; in general, SCAG's members considered this to be the fairest way of apportioning the region's assessed housing need. Introducing exceptions to the formula would make it difficult to maintain fairness across all of SCAG's 191 members (Ma'Ayn Johnson, pers. comm.).

Research Overview

California's RHNA program poses questions regarding competing policy goals and political forces between local, regional, and statewide scales of planning. How effective is RHNA at implementing a statewide goal of adequate housing supply when local jurisdictions have primary control over land use? Also, given structural and historical differences in land use patterns among cities within a region, is it possible for RHNA to meaningfully drive housing supply? What is meant

by a city's "fair share" of accommodating regional growth? Does allocating housing units based on expected household growth a fair method? To understand these issues, I pose the following research questions:

1. How do cities' RHNA allocations differ, and how have they changed over time? Do differences in socioeconomic or geographic characteristics among cities explain the differences in allocations?
2. How accurate have the RHNA program's projections of population growth and housing needs been over time?
3. How well have cities performed in terms of actual housing construction towards RHNA targets (over the entire lifespan of the RHNA program)?

To examine these questions, I analyzed data on RHNA allocations and performance for SCAG. I aimed to study how cities were given allocations and how they performed throughout the past. I used regression models to determine whether characteristics such as race, income, population density, and geography explain variation in RHNA allocations and performance among cities. Even though RHNA is based on quantitative forecasts of growth, only two studies to date have examined RHNA using statistical methods at a region-wide scale (Ramsey-Musolf 2016; Bromfield and Moore 2017), and none have studied the SCAG region as a whole.

Through this research, I aim to reveal the dynamics and tensions of competing political forces between local and regional scales of planning as they play out over three decades. Studying these questions and critically examining the conceptual frames of the RHNA program can reveal historical and geographical disparities of power and exclusion. I also want to understand whether the RHNA process is working effectively to address housing affordability and supply, a major concern of statewide planning.

CHAPTER 2

LITERATURE REVIEW

The RHNA process is the technical/quantitative engine at the heart of the California Housing Element law. Despite the central place that it has held for decades in California's housing policy framework, only a handful of research papers have examined RHNA directly. Using a historian's approach, Baer (1988; 2008) traced the evolution of the Housing Element Law, including the establishment of the general RHNA process in the mid-1980s. The author documented the debates between the various actors in the RHNA process and describes how the law has shifted in several stages between 1967 and 2004. The articles illustrated the tensions between local governments as they guard their autonomy and power over local land use, and state-level actors in their quest to impose mandates for the regional and statewide good. Baer did not examine RHNA's effectiveness from a quantitative perspective. Also, the timeframe of the history ends in 2004, just before Senate Bill 375 (Statutes of 2008) integrated the RHNA process with regional planning for climate action and transportation.

Lewis (2003; 2005) examined why a substantial proportion of cities and counties were not in compliance with Housing Element Law (i.e., when HCD had deemed a housing element non-compliant, or no housing element had been submitted at all). He found that noncompliant jurisdictions tended to have an older housing stock, have overt growth restrictions, and/or have more burdensome processes for development review. Bay Area cities were less likely to be in compliance than cities in Southern California (including the SCAG region, the San Diego region,

and Santa Barbara County). Nonetheless, he also found that there was no strong relationship between compliance status and the amount of growth in housing stock (from 1994 to 2000), but that noncompliance was linked to an 8% lower proportion of new multifamily units to existing multifamily units, a proxy for new affordable housing production. One limitation of the study was that noncompliance of housing elements was tabulated as a simple yes/no; many different factors can throw a housing element into noncompliance, including failure to identify adequate sites for housing to simply missing deadlines for submitting the housing element to HCD. He did not examine how well cities and counties performed towards achieving their assigned RHNA allocations, nor did he study how the allocations themselves were formulated.

Some policy reports have been written to provide selective detail about the RHNA program. For a capstone client project at UCLA's graduate program in urban planning, Simon (2007) conducted a basic descriptive review of RHNA performance data in the Southern California Association of Governments (SCAG) region for the 3rd Cycle (1998-2005). The author generally found that cities that performed better towards their RHNA allocations for affordable housing had some combination of favorable land use policies, staff resources, and local subsidies for affordable housing production. The study only examined the affordable portion of cities' RHNA allocation and the related production of affordable housing units, not total RHNA allocations or total housing production. Also, the study did not employ any inferential statistics.

The California Legislative Analyst's Office (Uhler 2017) found that for Bay Area cities, high rents and very low vacancy rates persisted even though they had met their RHNA allocation targets between 2014 and 2016. It also noted that actual housing construction often does not take place on the sites that cities designate in their housing elements. While the first finding is potentially revealing, the authors only examined performance over a two-year period, which comprises only a small snapshot in time during an eight-year RHNA review cycle. Housing developments often take years

to be permitted and to complete construction. Meeting RHNA targets for a two-year period does not necessarily mean that a jurisdiction has produced enough housing in the past or will do so in the remainder of the current RHNA cycle to meaningfully impact housing supply or rent costs.

Ramsey-Musolf (2013; 2016) produced the first quantitative analysis of cities' performance towards their RHNA allocations. His study was limited to a sample of 53 cities from 1990 to 2007; these cities included those of the Sacramento region (SACOG) and a small subset of cities in the Los Angeles (SCAG) region (specifically, Los Angeles City and the 31 cities of the San Gabriel Valley subregion). He found that better RHNA performance was associated with increasing production of affordable housing units, but also decreased production of housing units overall. The study does not take into account effects of distorted RHNA allocations, i.e., whether some cities have RHNA allocations that are disproportionately low compared to their size, thus making it easier to perform well.

Bromfield and Moore (2017) examined the RHNA performance of jurisdictions within the Association of Bay Area Governments (ABAG) region. They studied region-wide data for the 3rd, 4th, and 5th RHNA review cycles (1999-2006; 2007-2014 and 2015-2023). They found that for the 5th Cycle, cities with higher proportions of white residents received smaller allocations for affordable units on a per capita basis. This relationship was not found for the 4th Cycle, implying that changes in the allocation methodology for the 5th Cycle may have made for newly inequitable outcomes. Regarding RHNA performance, they found that for the 4th Cycle, the ABAG region permitted 99% of market-rate units that were needed, but less than 30% of affordable units needed. Over half of the cities permitted less than 25% of their RHNA allocation for affordable units. The study excluded the three biggest cities in the region from their analysis as outliers (San Francisco, Oakland, and San Jose). Most of the presented analyses focused on allocations and performance for

the affordable RHNA allocation, not the total RHNA allocation. Only the regressions on race had normalized the allocations by population size.

When these papers are considered together, some gaps become apparent in our current understanding of RHNA. First, quantitative analyses of the RHNA program are few and limited in scope. Ramsey-Musolf's work is limited to a small subset of California cities and only examines data between 1990 and 2007. This leaves out the most recent RHNA cycle for the SCAG region that had just concluded in 2013. Bromfield and Moore's study focuses mostly on the 2007-2014 cycle, and leaves out data for the 'big 3 cities' in its region. It also does not present its findings regarding the affordable RHNA allocations and performance in context with overall housing needs and production. Both studies also do not systematically compare how cities perform across cycles, i.e., longitudinally. This is a serious gap, especially if an accumulation of past actions by a local jurisdiction entrenches its performance along a certain path. Second, none of the studies place their findings on RHNA performance in context with measures of housing markets (e.g., growth in housing stock, income data, housing prices, vacancy rate). This would be necessary to reveal whether the RHNA program is effective in inducing housing growth or stabilizing housing markets.

Thus, I attempted to address these gaps in the research design for my study. I wanted to study data for the entire SCAG region. I also wanted to compare findings between review cycles across time, and test for associations with a variety of socioeconomic, demographic, and geographic factors. Finally, it would be ideal to study data for RHNA allocations and performance for both affordable units and total units.

CHAPTER 3

RESEARCH METHODOLOGY

Timeframe of Study

For this longitudinal study, I established the timeframe to encompass the 3rd, 4th, and 5th Cycles, which for the SCAG region extends from 1998 to 2021 and comprises three complete 8-year cycles. The timespan for each of the cycles is noted as follows (SCAG 2006; SCAG 2007b; SCAG 2012):

Table 2-1. RHNA Cycle Periods

3rd Cycle	1998 – 2005
4th Cycle	2006 - 2014 (January 2006 – June 2014)
5th Cycle	2013 - 2021 (October 2013 – October 2021)

The 3rd Cycle is the earliest cycle for which I could obtain a complete dataset for RHNA allocations and performance for the entire SCAG region. I obtained data on allocations for the 2nd Cycle (1988- 1998), but was not able to obtain performance data. The RHNA planning period was originally set for the period between 1988 and 1995; however, HCD temporarily suspended implementation of RHNA requirements due to state budget cuts in the early 1990s (Lewis 2003: 23). The elongation of the planning period and the lack of data on performance make it difficult to compare them with the latter cycles, so I excluded these data from the study.

For the 5th Cycle, SCAG established allocations for its member cities in late 2013, which I have included in my analysis; however, I excluded performance data from the scope of this study. HCD has data on performance for the first three years of the current cycle (as of the time of writing). RHNA performance is sensitive to the completion of housing projects, which occurs in discrete blocks and can take up to several years (from groundbreaking to final occupancy). Thus, it would be difficult to compare 5th Cycle performance to date with the two cycles that have been previously completed.

Sources of Data

- *RHNA Data*

Data for the 3rd Cycle is sourced from SCAG's 2006 report, *Housing Element Compliance and Building Permit Issuance in the SCAG Region* (SCAG 2006). It includes information on the allocations established and assesses performance using data on building permit issuance from the Construction Industry Research Board (SCAG 2006: 11).

Data for the 4th Cycle is sourced from SCAG and HCD. SCAG provides information on the allocations established for this cycle (SCAG 2007b), and HCD provides data on performance based on the change in the number of housing units for each jurisdiction, as determined by the California Department of Finance (CAHCD 2018). This measurement takes into account new units built and demolitions, unlike the 3rd Cycle data.

Data for the 5th Cycle is sourced from SCAG's Final RHNA Plan (SCAG 2012).

As a simplification for the purposes of this study, I omitted data for allocations given to the six county governments of the SCAG region. HCD and SCAG assigns a RHNA allocation for the unincorporated territories of each county. It is challenging, however, to match up census data for these unincorporated areas with precision in both space and for certain points in time. During a

cycle, new cities incorporate, reducing a county's unincorporated territory, which does not easily make for uniform comparisons across cycles. Also, counties themselves cannot easily be compared with each other, their unincorporated territories consisting of a heterogeneous combination of communities both urban and rural. This is consistent with similar considerations in Ramsey-Musolf's study (Ramsey-Musolf 2016: 493).

- *Independent Variables*

Information on socioeconomic indicators is sourced from the US Census Bureau, with data drawn from the decennial Census (1990, 2000 and 2010) and from the American Community Survey (2008- 2013 Five-Year Estimate), all via the Census Bureau's American Factfinder data portal. From these data I created the following variables for analysis: population density, race, median household income, median home value, and growth in number of households. Table 3-1 below indicates the sources of data that were matched to the time periods for each of the three RHNA cycles:

Table 3-1. Census Data Sources by RHNA Cycle

Variable	Source		
	<i>3rd Cycle (1998 – 2005)</i>	<i>4th Cycle (2006-2014)</i>	<i>5th Cycle (2013-2021)</i>
Population Density	2000 Decennial Census	2010 Decennial Census	2008-2013 American Community Survey 5-Year Estimate
Household Growth	1990-2000 change in Decennial Census	1990-2000 change in Decennial Census	2000-2010 change in Decennial Census
Household Income (median)	2000 Decennial Census (1999 dollars)	2010 Decennial Census	2008-2013 American Community Survey 5-Year Estimate
Race	2000 Decennial Census	2000 Decennial Census	2010 Decennial Census

To test for associations between race and RHNA allocations/performance, I constructed an index by computing the proportion of each city's population that is either Black/African American

(not Hispanic) or Hispanic/Latino (any race). Understanding that racial identity is very complex in American society, I selected these two racial categories to build the index as they have been of relatively more marginal socioeconomic and political status, historically and to the present day. I could have built an index based on the proportion of the population that is White/Not Hispanic. However, different groups of Asian Americans have had varying degrees of rapid upward mobility, especially in the San Gabriel Valley (Los Angeles County) (Preston 2012). Considering that I want to measure for an association between racial marginality and housing governance, I have consciously chosen to construct the index as noted above because I believe it to be a more conservative measurement. This is also consistent with methods that Bromfield and Moore (2017) employed in their study.

- *Distance from downtown Los Angeles*

To test for the effect of distance from one of the region's job centers (downtown Los Angeles), I calculated each city's distance from Los Angeles City Hall. Using ArcGIS 10.5, I used a shapefile layer from SCAG of every city in the region, and measured the distance from each city's centroid to Los Angeles City Hall (the shortest line between the two points). This simple method is sufficiently precise to resolve spatial differences among cities in the region. While there are other major job centers in the region, downtown Los Angeles is by far the densest one, with over 150,000 jobs per square mile (US Census Bureau 2018).

Statistical Methodology

- *RHNA Allocations and Performance: Parameterization*

For each cycle, I normalized the RHNA allocations and the units produced by the city's population to generate dependent variables of "units allocated/produced per capita." I believe this method allows for the most uniform comparisons across cities. Other methods of normalization are

possible (e.g. land area; percentage of area zoned single-family residential); however I believe units per capita is a useful normalization that allows for a clear view of the relative magnitude of growth for a city (both expected and actual), and most directly resolves differences among cities as to the relative access and influence that a resident can have over a particular city's government and politics of planning.

- *Regressions*

After generating basic descriptive statistics for all dependent and independent variables, I created a series of bivariate scatterplots using Microsoft Excel. Each independent variable was plotted against RHNA allocations per capita (both the total allocation and the portion of the total allocation dedicated for income-restricted affordable units, hereafter denoted as the “affordable allocation”). Each independent variable was also plotted against RHNA performance per capita (all units, regardless of affordability category; 3rd and 4th cycle only, as noted above). Variables for each RHNA cycle were plotted separately (i.e., the data for all cycles was not pooled together). Cities that were not yet incorporated at the beginning of the RHNA cycle were omitted for that cycle. Using IBM SPSS version 25, I conducted a regression analysis for each of these bivariate relationships. All independent variables were natural log-transformed (except for the two measured in percentages: race and household growth). All dependent variables were left untransformed.

For the multiple regression analysis, I first created a correlation matrix of all independent variables to control for collinearity. Any pair of variables that had a correlation coefficient exceeding 0.4 were separated into different regression models. Two models were built as a result: Model A includes race and distance to Los Angeles City Hall, and Model B includes median household income, population density, and household growth. As with the bivariate regressions above, each model was run against the dependent variables of RHNA allocations per capita (both total and affordable, all cycles) and RHNA performance (total units, 3rd and 4th cycles only). Each model was

run separately for each RHNA cycle. Cities that were not yet incorporated at the beginning of the RHNA cycle were omitted from the model for that cycle.

I used the ordinary least squares (OLS) method for all regression models (both bivariate and multiple), with standard errors based on 1,000 bootstrap samples to control for heteroscedasticity and departures from normality. I used a significance level of $P < 0.05$ for both the overall regression model and for coefficients of each independent variable in the model.

- *Descriptive Mapping*

To complement the bivariate scatterplots, I generated maps of the SCAG region depicting all of the dependent variables and most of the independent variables. I used percentile rankings of the cities in the region for each variable to illustrate the maps; this allows for a visualization of the distribution, with the middle category encompassing the city with the median value for the particular variable.

Research Questions and Hypotheses

Q1. *How do cities' RHNA allocations and housing production differ, and how have they changed over time?*

Do differences in socioeconomic or geographic characteristics among cities explain the differences in allocations?

H1a. Wealthier cities will have lower RHNA allocations per capita and lower housing production (RHNA performance) per capita.

H1b. Cities with a greater proportion of residents that are Black and Latinx will have larger RHNA allocations and housing production than cities with mostly White residents.

H1c. High-density cities will have larger RHNA allocations and housing production than low-density cities.

- These hypotheses are based on the premise that anti-growth/NIMBY sentiment is higher and more strongly represented in cities that are wealthier, Whiter, and with lower density. These cities would have the resources to deploy more restrictive zoning regulations that resist new housing and may also perpetuate legacies of exclusionary zoning.

H1d. RHNA allocations and housing production will increase as a city's distance from Los Angeles City Hall increases.

- This hypothesis is based on predictions of the monocentric city model (Harrison and Kain 1974), with downtown Los Angeles being similar to the job center in the model's "featureless plain" and concentrating the highest density.

Q2. *How accurate have the RHNA program's projections of population growth and housing need been over time?*

H2. The magnitude of a city's past household growth is highly associated with the size of RHNA allocations for each cycle, and with levels of housing production.

- Since past household growth is used to predict future household growth for determining RHNA allocations, these variables should be associated.

Q3. *How well have cities performed towards their RHNA targets (over the entire timeframe of this study)?*

H3. Cities with larger allocations per capita will achieve a smaller percentage of their respective RHNA allocation. This pattern should be consistent across all cycles.

- Cities with larger allocations per capita should be able to absorb less of their allocations than cities with relatively smaller obligations.

CHAPTER 4

RESULTS

In general, I found significant positive associations between RHNA allocations and race, distance from Los Angeles City Hall, and past household growth. I found significant negative associations between RHNA allocations and household income, home value, and population density. These were generally consistent across the three RHNA cycles. The 4th Cycle (2006-2014) had much stronger associations than the 3rd or 5th Cycles.

In contrast, I only found significant associations between housing production (units built per capita) and distance from Los Angeles City Hall and past household growth. Neither race, income, nor population density showed any significant associations with housing production.

Descriptive Statistics and Geographical Summary

Table 4-1 provides a summary of distributions of cities' characteristics, RHNA allocations, and housing production. Cities with consistently lower allocations per capita across all three cycles are in coastal areas (such as Malibu and Rancho Palos Verdes), parts of the Gateway Cities region in southern Los Angeles County (such as Downey, Bellflower, and Norwalk) and in Orange County (including Seal Beach and Laguna Beach). Cities with consistently higher allocations throughout the study period are generally located in the outer fringes of the SCAG region, including Lancaster and Palmdale (in Los Angeles County), and most cities in Riverside and Imperial Counties. Irvine stands

Table 4-1. Summary of Distributions of SCAG Cities' Characteristics, RHNA Allocations and Performance

	N	Mean	Median	Minimum	Maximum	Range	Regionwide (all residents pooled)
Distance from City Hall (miles)	191	29.1	29.0	4.0	213.5	209.5	
Household Growth, 1990-2000	174	13%	5%	-49%	115%	164%	9.2%
Household Growth, 2000-2010	188	13%	3%	-43%	204%	247%	8.6%
Population Density, 2000	188	3,218	3,376	18	23,799	23,781	473.4
Population Density, 2010	190	3,557	3,770	19	23,248	23,229	467.2
Black/Latinx Proportion, 2000	188	41%	34%	2%	98%	96%	52%
Black/Latinx Proportion, 2010	190	46%	39%	5%	98%	93%	51%
Household Income, 2000 (median, in 1999 dollars)	188	\$50,050	\$47,703	\$23,365	\$200,000*	\$176,635	\$45,807
Household Income, 2010	190	64,570	62,206	28,571	\$250,000*	\$221,429	\$59,642

Allocations / Housing Production (units per thousand residents)

	N	Mean	Median	Minimum	Maximum	Range
3rd Cycle - Total	186	26.0	14.1	0.0	234.5	234.5
3rd Cycle - Affordable	181	6.0	3.3	0.0	58.0	58.0
3rd Cycle - Units Produced	187	39.5	14.4	0.0	408.1	408.1
3rd Cycle - RHNA Performance	178	202%	100%	4%	2,938%	2,933%
4th Cycle - Total	186	45.0	20.4	0.3	466.8	466.5
4th Cycle - Affordable	187	26.0	11.8	0.0	263.5	263.5
4th Cycle - Units Produced	190	17.1	9.3	-118.7	157.6	276.3
4th Cycle - RHNA Performance	186	74%	48%	-463%	2,041%	2,504%
5th Cycle - Total	190	23.1	12.3	0.0	297.1	297.1
5th Cycle - Affordable	190	13.4	7.3	0.0	172.5	172.5

* Maximum reportable median income was \$200,000 in 2000 and \$250,000 in 2010; actual values may have been higher.

Sources: US Census Bureau (1990, 2000, and 2010 Decennial Census); SCAG 2006; SCAG 2007b; SCAG 2012.

out as having an allocation in the top quintile for the SCAG region in all three cycles, far higher than other cities in Orange County.

The median total allocation in the 5th Cycle was approximately 12.3 units per thousand residents, and the mean total allocation was 23.1 units per thousand residents. The difference in allocations between cities in the bottom quintile and the top quintile is stark. In Orange County, Newport Beach (with a population of roughly 87,000 in 2016) was allocated a total of 5 units for the 5th Cycle. Meanwhile nearby, Lake Forest was allocated over 2,700 units, yet it has a similarly sized population (about 80,000 in 2016). Comparing across the SCAG region, Manhattan Beach (in Los Angeles County) was allocated a total of 38 units, or about 1.1 units per thousand residents. Desert Hot Springs, located in the Coachella Valley (Riverside County), was allocated about 160 units per thousand residents.

For affordable allocations, the median was 7.3 units per thousand residents and the mean was 13.4 units per thousand residents. Using the same cities as points of comparison, all 5 units assigned to Newport Beach were required to be restricted as affordable units, whereas Lake Forest was assigned almost 1,600 affordable units, or about 20.6 units per thousand residents. Manhattan Beach was assigned 23 affordable units, or about 0.65 units per thousand residents, whereas Desert Hot Springs was allocated 91.7 units per thousand residents. The geographic patterns for affordable allocations are very similar to those for total allocations.

The ranking of Los Angeles, the largest city in the region, has shifted from cycle to cycle. In the 3rd Cycle, its total allocation was 16.3 units per thousand residents and its affordable allocation was 4.9 units per thousand residents. This positioned Los Angeles at the 54th percentile. In the 4th and 5th Cycles, its ranking increased to the 63rd and 69th percentiles, respectively. Other cities immediately surrounding Los Angeles followed a similar pattern, shifting from the middle quintile in the 3rd Cycle to the second highest quintile (60th to 80th) in the 4th and 5th Cycles.

Inferential Statistics

Tables 4-2, 4-3, and 4-4 show the results of the multiple regression model on these independent variables (for total RHNA allocations, affordable RHNA allocations, and housing production, respectively). I discuss each of the independent variables, using bivariate scatterplots and maps as further illustration of the trends depicted in the multiple regression models (Appendices A and B).

Household Income

Lower RHNA allocations are associated with cities with higher median household incomes. For total allocations, this association is present in the 3rd Cycle but not significant after bootstrapping ($B = -0.012$, $P = .063$). It strengthens in the 4th Cycle ($B = -0.051$, $P < .001$), and lessens in the 5th Cycle ($B = -0.026$, $P < .01$). The median city in the 5th Cycle has a median household income of about \$60,700, which results in an estimated allocation of 27.1 units per thousand residents. An increase of 10% in its median household income would decrease the estimated total RHNA allocation by 9.5%.

This pattern of associations is similar for affordable allocations, and is significant across all three cycles. The same median city above would have an estimated allocation of 16.9 affordable units per thousand residents. An increase of 10% in its median household income would decrease the estimated affordable RHNA allocation by 8.5%.

Race

Higher RHNA allocations are associated with cities with a higher proportion of Black and Latinx residents. For total allocations, this association is not significant in the 3rd Cycle ($B = 0.003$, $P = .063$). It becomes significant in the 4th Cycle ($B = 0.029$, $P < .05$). It remains at the same magnitude in the 5th Cycle, but is more significant ($B = 0.026$, $P < .001$). The median city in the 5th

Table 4-2. Total RHNA allocations per capita on City Characteristics

Variable	5th Cycle (2013-2021)				4th Cycle (2005-2013)				3rd Cycle (1997-2005)			
	<u>Model A</u>		<u>Model B</u>		<u>Model A</u>		<u>Model B</u>		<u>Model A</u>		<u>Model B</u>	
	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)
Race (Black & Latinx population, %)	0.026*** [0.007]	0.203			0.029* [0.013]	0.123			0.003 [0.007]	0.025		
Household Income (Median, Ln)			-0.026** [0.06]	-0.288			-0.051*** [0.013]	-0.284			-0.012 [0.006]	-0.146
Distance to Los Angeles City Hall (miles, Ln)	0.018*** [0.003]	0.457			0.040*** [0.006]	0.511			0.019*** [0.003]	0.476		
Population Density (Ln)			-0.006 [0.003]	-0.193			-0.022** [0.008]	-0.328			-0.008** [0.003]	-0.276
Household Growth (%)			0.056*** [0.008]	0.421			0.131*** [0.035]	0.362			0.074** [0.021]	0.448
Constant	-0.05*** [0.009]		0.350** [0.093]		-0.103*** [0.020]		0.766*** [0.132]		-0.038*** [0.009]		0.209** [0.084]	
Number of observations	190		188		186		186		186		174	
Adjusted R-squared	0.236		0.339		0.264		0.386		0.216		0.371	
F-statistic	30.185		32.951		34.209		37.002		26.466		34.99	
P	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	

P:

<0.05 - *

<0.01 - **

<0.001 - ***

Standard errors based on 1,000 bootstrap samples.

Ln: natural log.

Table 4-3. Affordable RHNA allocations per capita on City Characteristics

Variable	5th Cycle (2013-2021)				4th Cycle (2005-2013)				3rd Cycle (1997-2005)			
	<u>Model A</u>		<u>Model B</u>		<u>Model A</u>		<u>Model B</u>		<u>Model A</u>		<u>Model B</u>	
	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)
Race (Black & Latinx population, %)	0.014*** [0.004]	0.194			0.016* [0.007]	0.115			0.002* [0.001]	0.084		
Household Income (Median, Ln)			-0.014** [0.004]	-0.281			-0.026*** [0.007]	-0.257			-0.006 [0.002]	-0.266
Distance to Los Angeles City Hall (miles, Ln)	0.010*** [0.002]	0.45			0.023*** [0.004]	0.515			0.005*** [0.001]	0.494		
Population Density (Ln)			-0.004* [0.002]	-0.206			-0.011** [0.004]	-0.301			-0.002** [0.001]	-0.34
Household Growth (%)			0.033** [0.007]	0.424			0.085** [0.020]	0.422			0.015** [0.005]	0.357
Constant	-0.028*** [0.006]		0.199** [0.054]		-0.058*** [0.012]		0.392*** [0.102]		-0.01*** [0.002]		0.083** [0.023]	
Number of observations	190		188		187		187		181		171	
Adjusted R-squared	0.227		0.345		0.267		0.382		0.231		0.384	
F-statistic	28.692		32.821		34.9		36.623		28.066		36.313	
P	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	

P:
<0.05 - *
<0.01 - **
<0.001 - ***

Standard errors based on 1,000 bootstrap samples. Ln: natural log.

Table 4-4. Total units built per capita on City Characteristics

Variable	4th Cycle (2005-2013)				3rd Cycle (1997-2005)			
	<u>Model A</u>		<u>Model B</u>		<u>Model A</u>		<u>Model B</u>	
	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)	Coef. (B)	Std. Coef. (Beta)
Race (Black & Latinx population, %)	0.002 [0.005]	0.018			-0.008 [0.011]	-0.035		
Household Income (Median, Ln)			-0.006 [0.005]	-0.079			-0.017 [0.011]	-0.106
Distance to Los Angeles City Hall (miles, Ln)	0.013*** [0.002]	0.435			0.037*** [0.014]	0.517		
Population Density (Ln)			-0.002 [0.005]	-0.084			-0.015** [0.006]	-0.289
Household Growth (%)			0.066*** [0.014]	0.474			0.172*** [0.034]	0.554
Constant	-0.027** [0.009]		0.088** [0.0672]		-0.082*** [0.018]		0.318 [0.167]	
Number of observations	190		188		187		174	
Adjusted R-squared	0.181		0.247		0.265		0.498	
F-statistic	21.827		19.907		34.581		58.316	
P	<0.001		<0.001		<0.001		<0.001	

P:
 <0.05 - *
 <0.01 - **
 <0.001 - ***

Standard errors based on 1,000 bootstrap samples. Ln: natural log.

Cycle has a Black/Latinx proportion of 39%, which results in an estimated allocation of 21.7 units per thousand residents. An increase of 10 percentage points in the Black/Latinx proportion would increase the estimated total RHNA allocation by 10.9%.

This pattern of associations is similar for affordable allocations and is significant across all three cycles. The association is weak in the 3rd Cycle, but becomes seven to eight times stronger in the 4th and 5th Cycles. The same median city above would have an estimated allocation of 12.6 affordable units per thousand residents. An increase of 10 percentage points in the Black/Latinx proportion would increase the estimated affordable RHNA allocation by 10.3%.

Distance from Los Angeles City Hall

RHNA allocations tend to increase as a city's distance from downtown Los Angeles increases. This association is highly significant across all cycles and for both total and affordable allocations ($P < .001$ in all models). Like income, the association in the 4th Cycle's is twice as strong as that for the 3rd and 5th Cycles.

The median city in the region is 29 miles away from Los Angeles City Hall. In the 5th Cycle, the regression model estimates a total allocation of 23.1 units per thousand residents and an affordable allocation of 13.2 units per thousand residents for the median city. Increasing the distance by 10% results in an estimated increase in the total allocation by 7.5% and in the affordable allocation by 7.3%.

Population Density

RHNA allocations tend to decrease as a city's population density increases. Population density generally increases from downtown Los Angeles, with the sparsest cities at the fringe of the SCAG region.

For total allocations, the association with between population density is very significant for the 3rd and 4th Cycles ($P < .01$) but not significant for the 5th Cycle ($P = 0.07$). For affordable allocations, the association is significant for all cycles, but decreases in significance with each passing cycle. Similar to income and distance from Los Angeles City Hall, the association in the 4th Cycle's is twice as strong as that for the 3rd and 5th Cycles.

In the 5th Cycle, the median city has a population density of about 3,800 persons per square mile. The regression model estimates a total allocation of 25.0 units per thousand residents and an affordable allocation of 24.1 units per thousand residents for the median city. Increasing population density by 10% results in an estimated decrease in the total allocation of 3.4% and in the affordable allocation of 6.0%.

Past Household Growth

Higher RHNA allocations are associated with cities which had higher rates of past household growth. This association is very significant across all three cycles and for both total and affordable allocations ($P < .01$ for all models).

The median city in the 5th Cycle grew 3% in its number of households between 2000 and 2010. The regression model estimates a total allocation of 16.4 units per thousand residents and an affordable allocation of 9.4 units per thousand residents for the median city. An increase of 10 percentage points in past household growth results in an estimated increase in the total allocation of 40.0% and in the affordable RHNA allocation of 40.3%.

Associations with housing production

Only a city's distance from Los Angeles City Hall and its past household growth are associated with the per capital production of housing units (for both the 3rd and 4th Cycles). Population

density is significant only for the 3rd Cycle. Other variables such as race, income, and population density do not have significant relationships with housing production.

The median city in the region is 29 miles away from Los Angeles City Hall. In the 4th Cycle, the regression model estimates a total production of 16.9 units per thousand residents for the median city. Increasing the distance by 10% results in an estimated increase in housing production of 7.3%.

With respect to household growth, the median city in the 4th Cycle grew 5.3% in its number of households between 1990 and 2000. The regression model estimates a total production of 11.7 units per thousand residents for the median city. An increase of 10 percentage points in past household growth results in an estimated increase in housing production of 59.7%.

RHNA Performance

During the 3rd Cycle, there was no discernable pattern for cities' RHNA performance (the percentage of the total allocation built). The median for RHNA performance was 100%; Los Angeles built 91% of its total allocation. Cities with high levels of RHNA performance included those with small allocations (like Malibu, building 32 times more than its total allocation of 14 units) and large ones (like Irvine, at 209% of over 10,000 allocated units). Similarly, poorly performing cities varied from those in the Gateway Cities subregion (including Bell, Commerce and Maywood, which ranged from 17-20%) to wealthier cities such as San Clemente, Laguna Woods, and Glendale (4.3%, 5.3%, and 18%, respectively).

Most cities in the 4th Cycle did not meet their allocation targets. RHNA performance was particularly low for cities with large allocations located at the fringes of the SCAG region (less than 50%). The few cities that built more than 200% of their allocations typically had small ones (e.g. Santa Monica and Rancho Palos Verdes). Rancho Cucamonga was an exception, building 365% of its allocation of about 2,300 units (or 18 units per thousand residents).

CHAPTER 5

FINDINGS

RHNA Allocations

The regression analyses and the qualitative review of the geographical distribution of RHNA allocations clearly confirm all but one of the hypotheses that I posed regarding city characteristics (H1a, H1b, H1d). Past household growth, race, household income, and population density are strong predictors of the size of a city's allocations (both total and affordable). Higher allocations are associated with cities with more residents of color, poverty, and distance from downtown Los Angeles. While these associations may not be surprising, the magnitude of the disparities is truly striking. On a per capita basis, the total allocation for Desert Hot Springs (Riverside County) is almost 150 times larger than that for Manhattan Beach (Los Angeles County). A difference of two orders of magnitude separates these two cities at opposite ends of the regional distribution. This is consistent with how the regression models predict that even small changes in a city's socioeconomic makeup can result in substantial changes to its estimated allocation.

My hypothesis regarding population density and allocations was not confirmed (H1c). I had expected denser cities to have higher allocations per capita, assuming that denser cities would be more accepting (politically) of additional density. However the opposite trend is the case. On an absolute basis, denser cities may have larger allocations, but it could be challenging for such a city to continue to add density at the same rate. Sparser cities may have more land capacity to absorb more growth.

These results imply that there are latent biases of race, income, and density in SCAG's methodology for creating RHNA allocations. Further research is needed to link these findings with aspects of SCAG's Integrated Growth Forecast that were used to create the RHNA allocations for each cycle (cites for 4th & 5th Cycle methodologies). One factor may be that the Integrated Growth Forecasts assumes different fertility, mortality, migration, and headship rates for different ethnic groups (SCAG 2007a: 57), which could partially explain the disparities among cities.

These biases may be explicit in the methodology or could simply be a reflection of structural disparities inherent in using past growth to project future growth. In either case, the RHNA process at SCAG is serving to re-inscribe these disparities into its projections of how the region is expected to grow. This recursive effect also reinforces that high growth rates will continue for cities at the fringes of the region, exacerbating sprawl, while rewarding slow-growth and no-growth cities with smaller allocations. This runs counter to principles of smart growth that are at the core of SCAG's Sustainable Communities Strategy (SCAG 2016: 2-9).

These findings are also similar to those that Bromfield and Moore (2017) found for the ABAG region. They found that both that race and income were linked to allocation size during the 5th Cycle (2015-2023). Both SCAG and ABAG modified their allocation methodologies to locate housing near high quality transit areas (Bromfield and Moore 2017: 18; SCAG 2011). It is unclear if there is a causal relationship between prioritizing housing near transit and exacerbating racial inequities in the allocations.

Housing production and RHNA performance

While allocations show strong associations with socioeconomic factors, housing production does not. I had expected housing production to follow the same pattern as allocations, but the data do not bear out these hypotheses. Only past household growth and distance from downtown Los

Angeles show significant associations with housing production. Population density is a significant association only in the 3rd cycle. This would imply that housing production is occurring at similar levels among cities with different socioeconomic profiles.

RHNA performance shows no clear pattern with respect to the socioeconomic variables studied. But most cities failed to meet their allocations in the 4th Cycle, which could be due to a combination of overly high projections made at the beginning of the cycle in 2006-2007 and the implosion of the housing market during the Great Recession of 2008-2009. Bromfield and Moore (2007: 14) found similar results for ABAG's affordable RHNA allocations during their 4th Cycle.

Many factors play into RHNA performance. Some include efforts intrinsic to a city government's efforts to accommodating their allocations, including appropriate zoning to create capacity for new housing and reducing barriers in permit review. Others depend on market forces; sometimes builders do not seek development opportunities despite all of the encouraging efforts that some cities may take.

Longitudinal trends: the case of Los Angeles

One encouraging trend is that the city of Los Angeles and many other nearby cities have moved from being close to the median in terms of allocation size and housing production to being well above the median in the 4th and 5th Cycles. This indicates that relatively more growth is being directed closer to Los Angeles, even though cities on the regional fringe still have significantly higher allocations and housing production. Indeed, for the 5th Cycle, the strength of the associations with the socioeconomic variables studied is half that of the 4th Cycle.

The Gateway Cities: so close, yet so far behind?

The jurisdictions that comprise the Gateway Cities subregion in Los Angeles county include Bell, Lakewood, and South Gate in its northern area and Hawaiian Gardens, Huntington Park, and Compton towards the south. These cities are similar in that they are majority-minority communities and have household incomes lower than the county median, but also have relatively smaller allocations, housing production and RHNA performance. This is an exception to the overall regional trend of higher allocations and housing production linked to communities of color and of lower economic status. How is this so? Many of these cities are located along the Interstate 710 freeway corridor, which has high volumes of freight truck traffic serving industrial warehouses and the ports of Long Beach and Los Angeles. These cities are possibly seeing less investment in housing starts than the rest of the region, and in the case of Bell and Maywood, less stable city management. While their proximity to downtown Los Angeles and Long Beach would seem to make them desirable for new development from a smart growth standpoint, historical trends of disinvestment appear to continue to be perpetuated into the future. The RHNA allocation process reinforces slow growth with smaller allocations going forward. It is not clear if modifying the allocation methodology to give the Gateway Cities relatively larger allocations would send a market signal to encourage more housing development there. I discuss this possibility further in the Policy Recommendations and Conclusion chapter below.

Limitations/Further Research

Data on affordable housing production

A major component of data missing from this study is information on production of affordable units in each city, and by extension each city's performance towards its affordable allocation. It is possible that patterns of affordable housing production could differ significantly from those of

overall housing production. Unlike the ABAG region, this information has not been compiled into a single dataset by either HCD or SCAG. It is likely possible to tabulate this information from housing elements or annual progress reports required by HCD. It would be necessary to capture a uniform count of units built through the Low Income Housing Tax Credit and units that are unsubsidized (e.g. required by inclusionary zoning). The data compiled by Simon (2007) for the 3rd Cycle is a promising start but needs to be verified before use.

SCAG/ABAG comparisons

ABAG data should be incorporated into a future iteration of this study. A complete dataset of allocations and performance for units overall and for affordable units has been compiled by ABAG and was used in Bromfield and Moore's 2017 study. The ABAG region has a very different geography compared to SCAG, with three major cities encircling San Francisco Bay (San Francisco, Oakland, and San Jose). Bromfield and Moore excluded these three cities from their analysis and did not present an analysis of total allocations or housing production, focusing only on affordable housing allocations and production. I would incorporate these missing portions back into a study to allow for a full comparison with SCAG data.

Within-county trends

I have begun work to examine whether the same associations that I have observed at the regional scale are present within each county. Some difficulties I encountered in the process are that many of the independent variables become collinear when shifting to the county level. Also the number of cities is small for some counties, making a robust regression analysis difficult. This may be due to spatial autocorrelation.

Los Angeles: a city, or a region?

With a population of almost 4 million in 2016 and stretching across almost 470 square miles, the city of Los Angeles could qualify as a region unto itself. Its neighborhoods are diverse, ranging from slow-growth areas such as Bel Air and Pacific Palisades to the rapidly densifying central city. In this study, the differences between these neighborhoods are flattened into a single data point in the regional distribution. Despite breaking up the city into different Community Plan areas, the city's housing element does not formally disaggregate its allocation across these areas. The housing dynamics within the city itself and their relationship to SCAG's RHNA process could be the subject of a future study.

Parameterization of allocations and housing production

This study normalized the allocations and housing production of each city by its population size to yield data in per capita terms. I believe this to be a useful normalization that allows for a clear view of the relative magnitude of growth for a city. However other normalizations are possible. An analysis of allocations or production by land area may be redundant with this study's comparison by population density. Incorporating zoning capacity or a measure of a city's area zoned for single-family residential could yield interesting patterns.

Jobs/housing balance and other housing market indicators

This study assumes that downtown Los Angeles is the jobs center of the SCAG region. While this may be true, there are other significant job centers in each of the six counties. Information on the number of jobs within each city could give more resolution into the region's polycentric nature, and allow for detection of any disparities among cities due to a jobs/housing imbalance.

Additionally, the effects of the RHNA program on regional housing markets should be examined. Selecting indicators is tricky, as measures such as home prices and vacancy rates typically reflect and incorporate incomes and commuting distances. A useful measure would be to test allocations and housing production against the proportion of households that are cost-burdened.

CHAPTER 5

POLICY RECOMMENDATIONS AND CONCLUSION

California's Housing Element Law, and RHNA in particular, find few friends among local governments. Crafting regional assessments, local allocations, and housing elements requires COGs and cities to commit significant resources to carry out the law's unpopular mandates. At the same time, it is unclear that the law is working to send clear market signals to facilitate development throughout the region. My findings show that many cities, if not most, fail to have enough new housing built to meet their allocations, and that housing production itself is associated only with increasing distance away from downtown Los Angeles and past trajectories of household growth. This implies that both the RHNA process at SCAG and the work of actors in the housing market are simply taking the easier route of accommodating the region's growth: sprawl.

Given these results, RHNA can benefit from re-examination and retooling. One critical aspect of the allocation methodology that needs serious reconsideration is its use of past household growth trends to project future housing needs. While it is not highly correlated with race or income, relying so heavily on past household growth for allocation purposes continues to re-inscribe racial and economic disparities in a region. And the basic premise of using past household growth should be questioned: what does it mean for a city to achieve 100% of its allocation? Does it necessarily lead to more affordable housing costs? I argue that RHNA simply directs cities to keep up with a treadmill of expected growth, but that doing so only maintains the dynamics of a city's housing market constant, at best. Aside from the affordable RHNA allocation, the process does not directly account

for or alleviate housing cost burdens or displacement. It assumes that filtering will provide for increased housing affordability.

I recommend that RHNA allocation methodologies be changed in two ways. First, instead of relying heavily or solely on growth projections, a new formula should instead focus on accommodating the region's cost-burdened population. Setting numeric goals to provide more affordable units to directly reduce the size of the cost-burdened population will clearly prioritize the neediest. Both Ramsey-Musolf (2016) and Bromfield and Moore (2017) show that the market is creating enough market-rate housing to meet market-rate allocations, but far from enough affordable, cost-restricted housing. Perhaps a future RHNA formula would still have a market-rate component to allocations, but that would be emphasized less. Second, action should be taken to redress historical and spatial trends of socioeconomic inequity and disparity in housing. Slow-growth and no-growth cities, which tend to be whiter and wealthier, are rewarded with smaller allocations in the current RHNA process. The opposite should be the case. Re-coding this into an allocation formula would be a clear way to seek such redress.

The Housing Element Law has changed a number of times since it was first adopted in 1969 (Baer 1998; Baer 2008; Lewis 2003: 11-34; Ramsey-Musolf 2017). But Senator Wiener is currently pursuing (as of the time of writing) a RHNA reform bill in the Legislature, SB 828, that could provide some redress of regional inequities. Some of its key provisions include, among others:

- Requiring that cities provide zoning capacity to accommodate 125% of its affordable allocation, and that at least 100% of its total allocation be provided in multifamily zoning.
- Taking into account new criteria including overcrowding, cost-burdened populations, and household income growth as factors into formulating the COG's allocation methodology.
- Re-weighting allocations for cities with higher household incomes, job centers, and high-quality transit access.

So far, SB 828 appears to provide strong policy direction to address “racial and wealth disparities throughout a region.” However, it allows COGs to take the lead in constructing the parameters of new formulas that would comply with these new requirements. COGs already must operate by consensus of its members, making it questionable as to how vigorously a COG would embrace departures from its current allocation methodology. It would remain to be seen how HCD would implement the bill’s provisions and whether it would have the political support to modify or reject what a COG would propose to do.

It is also unclear how my suggested changes to RHNA allocation formulas or SB 828 would affect the Gateway Cities. They are a group of jurisdictions that are slow-growth but not wealthy or White. Sudden upzonings would potentially ignite or exacerbate displacement pressures. Indeed, the city of Long Beach has joined forces with Redondo Beach to oppose SB 828 (Senate Committee on Rules 2018).

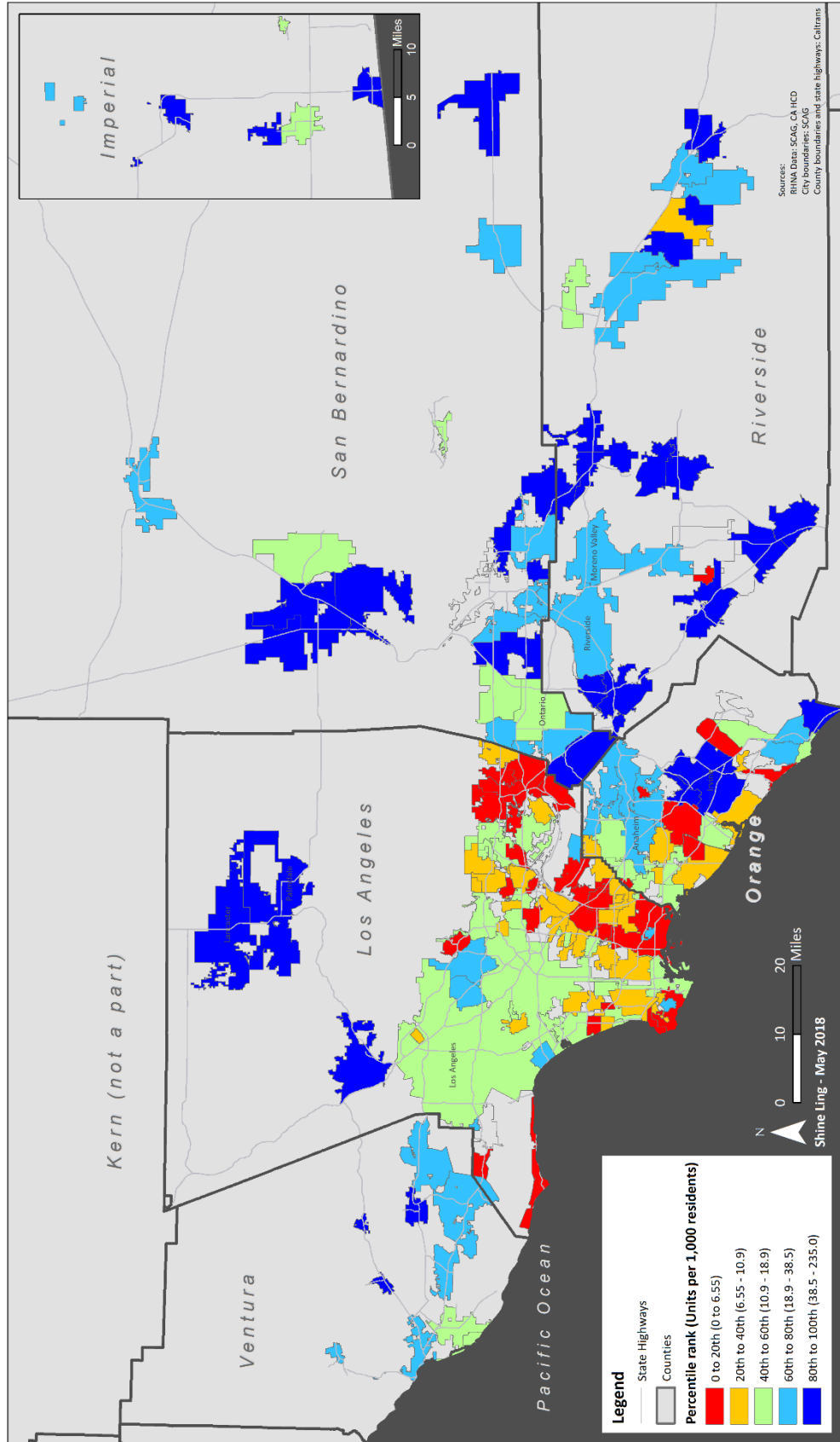
* * *

Ultimately, RHNA alone cannot solve the current housing crisis. Alleviating high housing costs and combatting displacement requires different strategies at different scales. More housing must be produced and existing units preserved; and tenants and citizens need to build up legal protections and their own assets (Crispell et al. 2017: 187). California Housing Element law and RHNA, however, are the state’s only tools to focus attention and direction on housing at the regional scale. It also, at its core, checks the vast powers of land use control that local governments wield, often to the detriment of the less fortunate. What is clear is that the current RHNA process, which relies on a straightforward formula and thus appears to be fair, only entrenches structural inequality in the region. What is promising is that solutions to deconstruct and alleviate these inequalities to generate a more robust sense of fairness are possible.

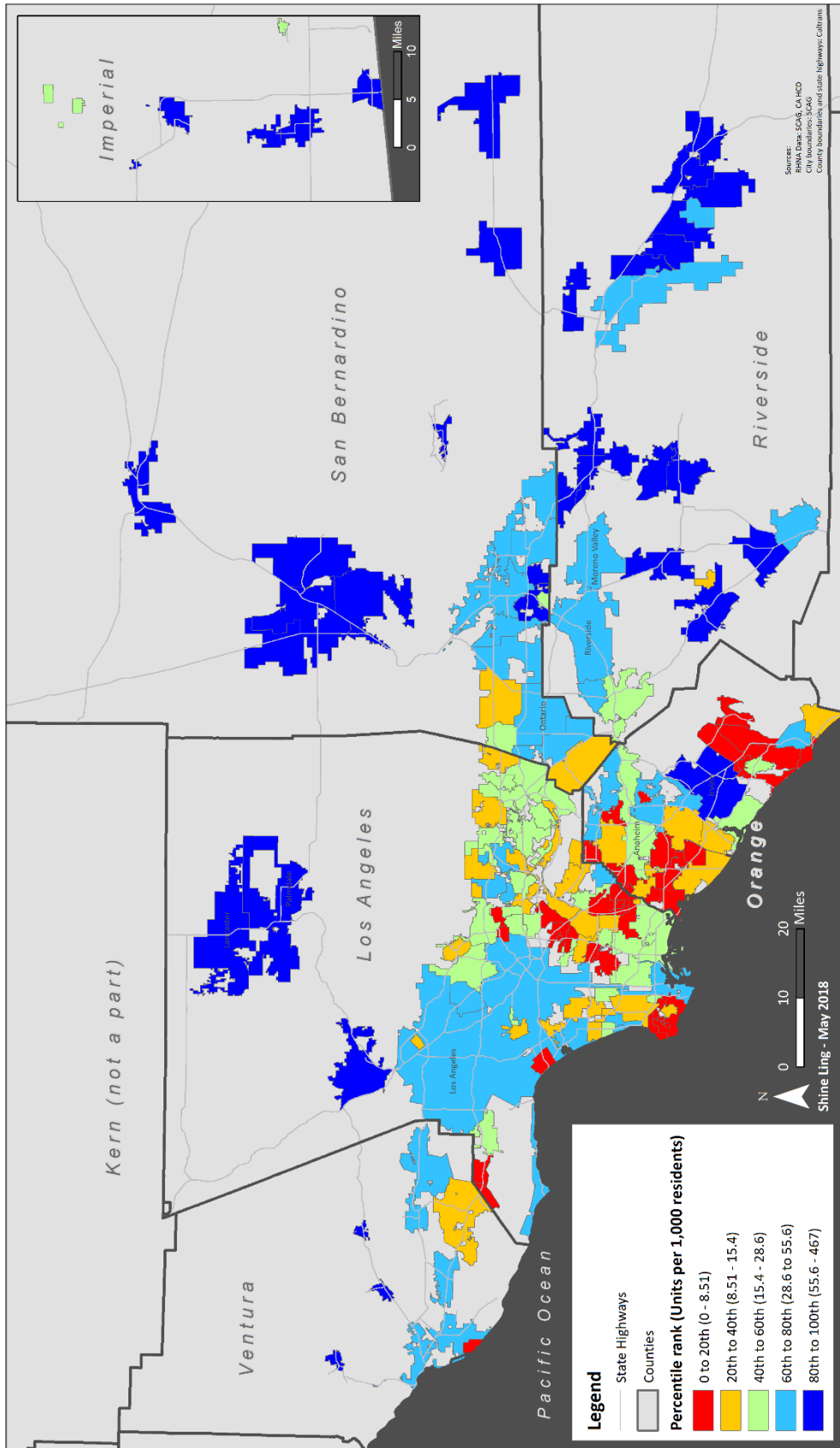
APPENDIX A

MAPS

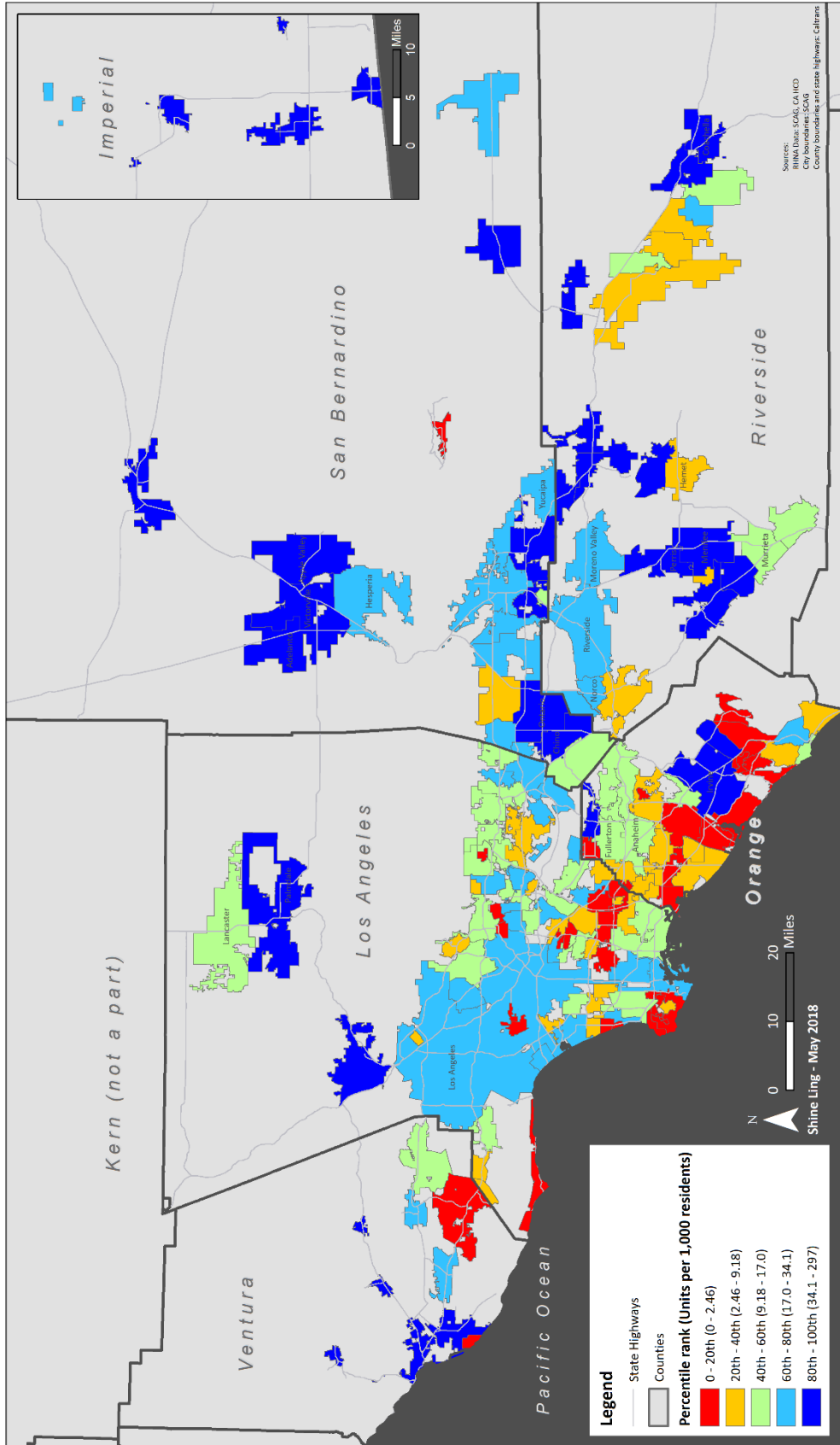
RHNA Allocations per Capita (all units)- 3rd Cycle (1997-2005)



RHNA Allocations per Capita (all units) - 4th Cycle (2005-2013)

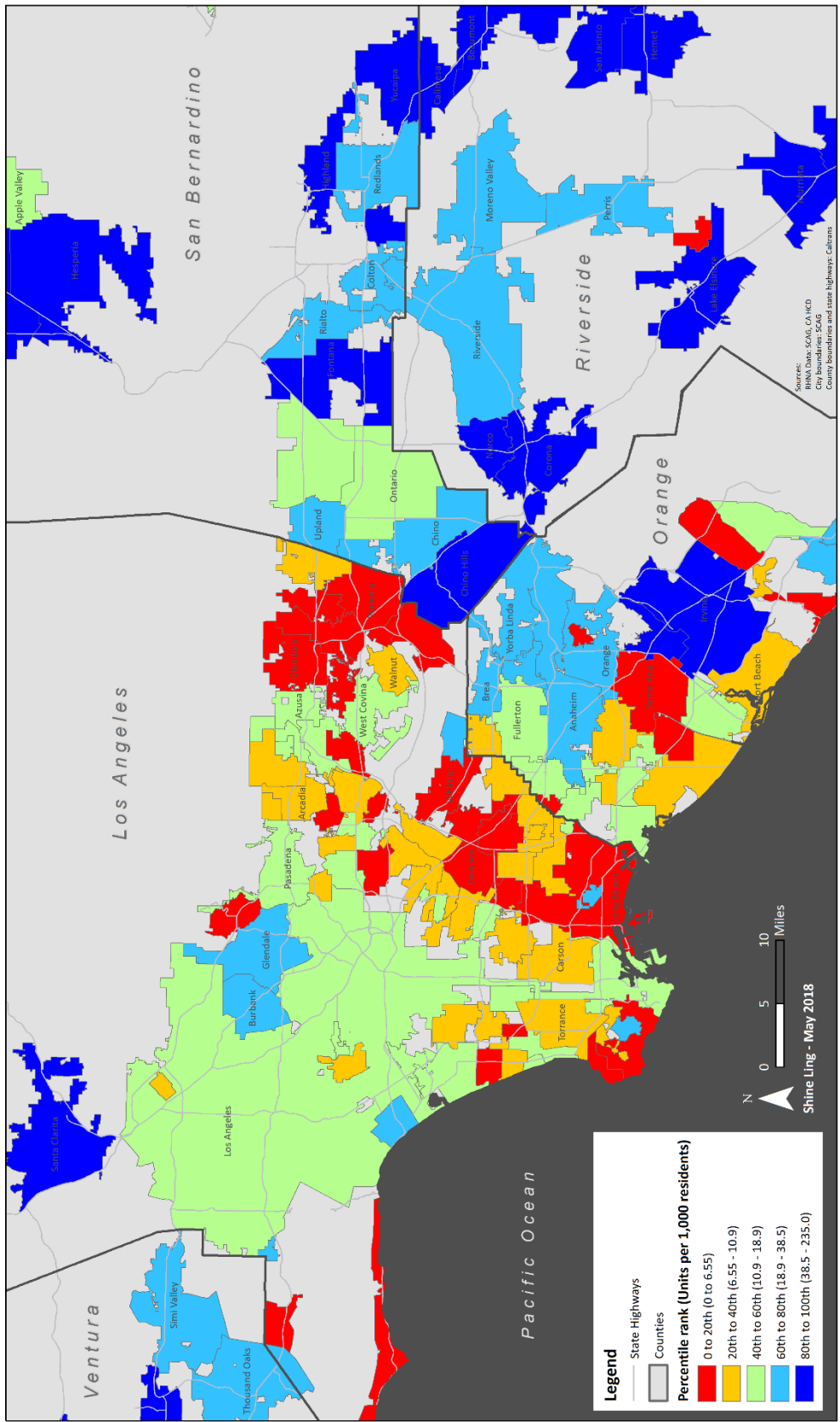


RHNA Allocations per Capita (all units) - 5th Cycle (2013-2021)



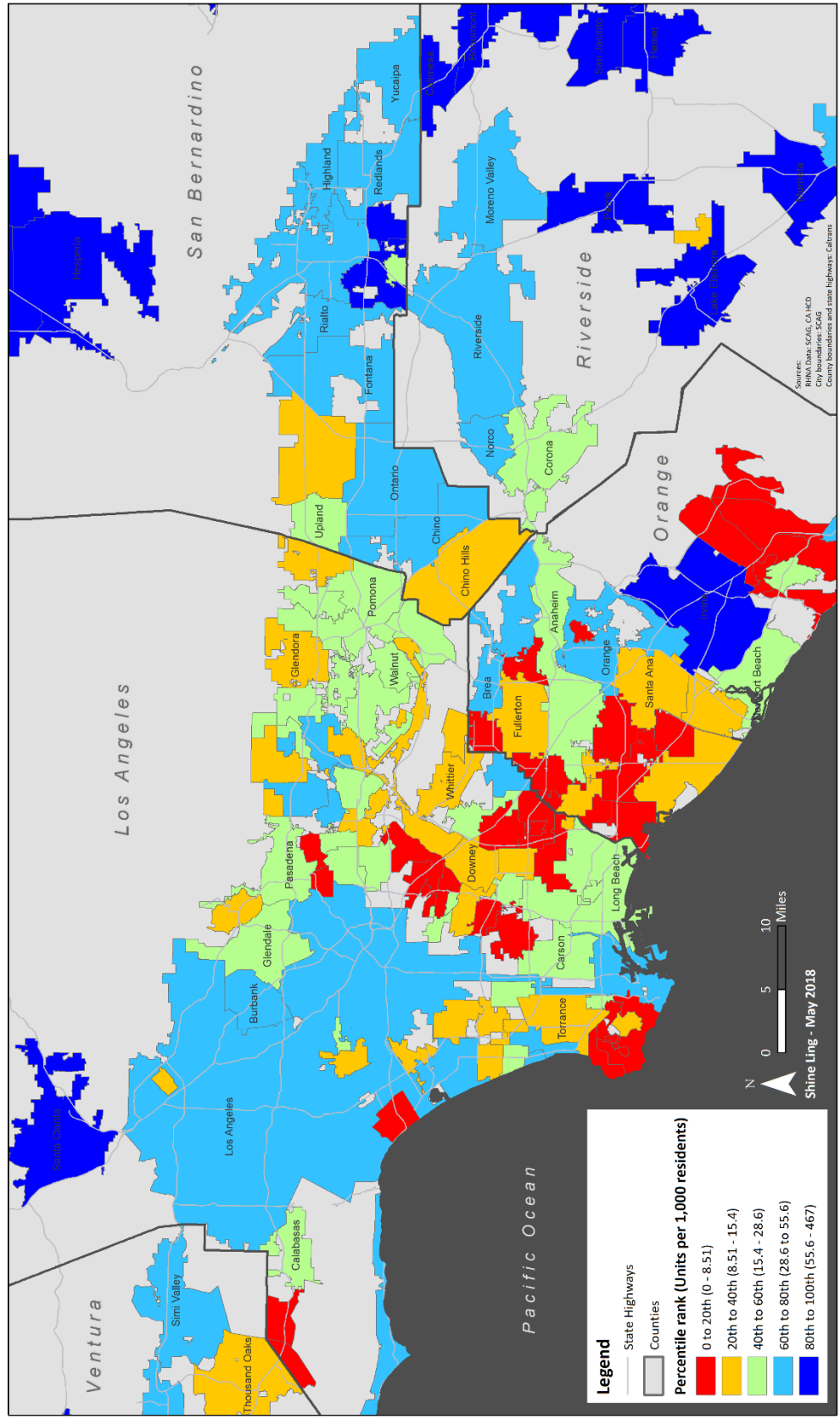
RHNA Allocations per Capita (all units) - 3rd Cycle (1997-2005)

Los Angeles metro area



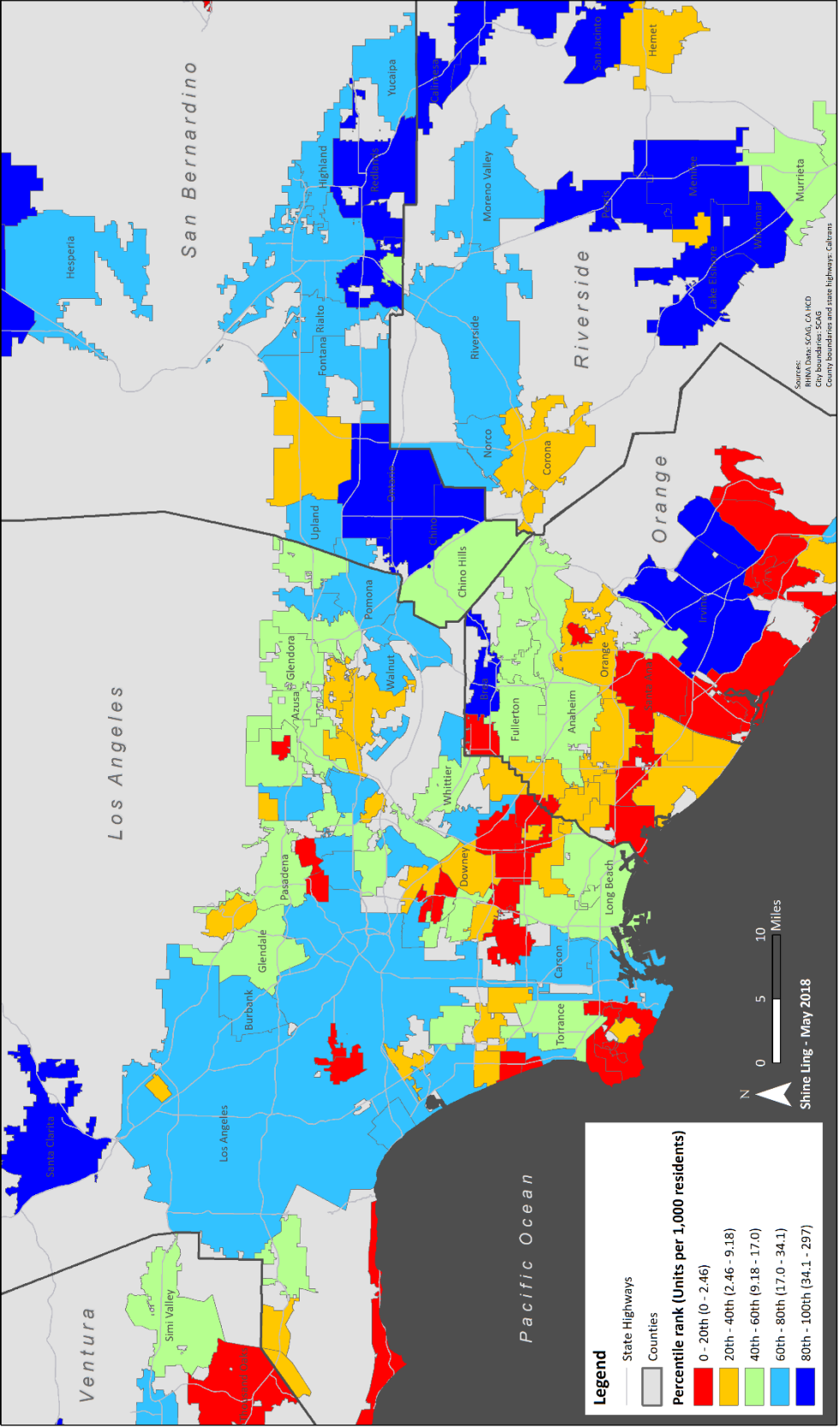
RHNA Allocations per Capita (all units) - 4th Cycle (2005-2013)

Los Angeles metro area

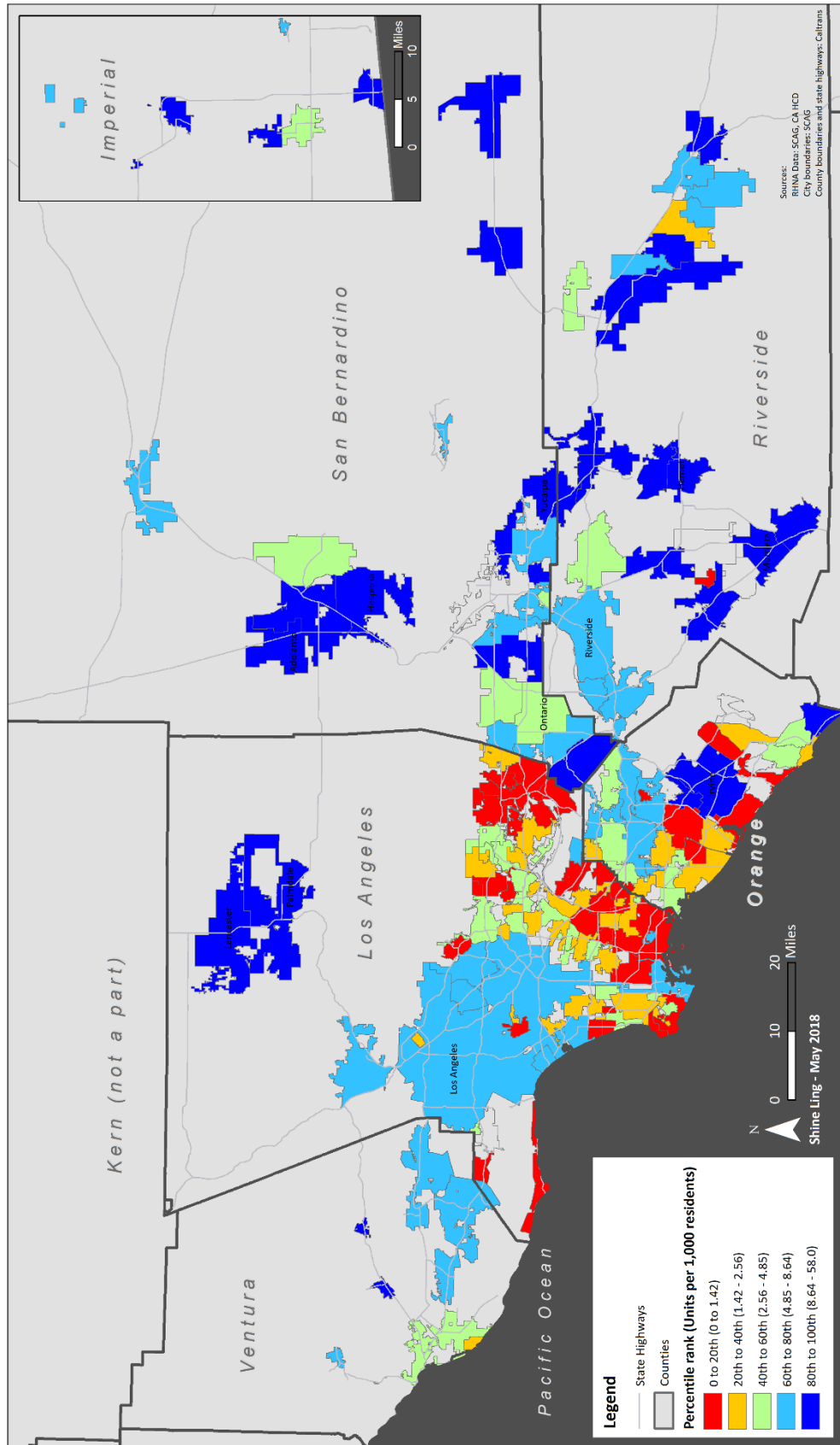


RHNA Allocations per Capita (all units) - 5th Cycle (2013-2021)

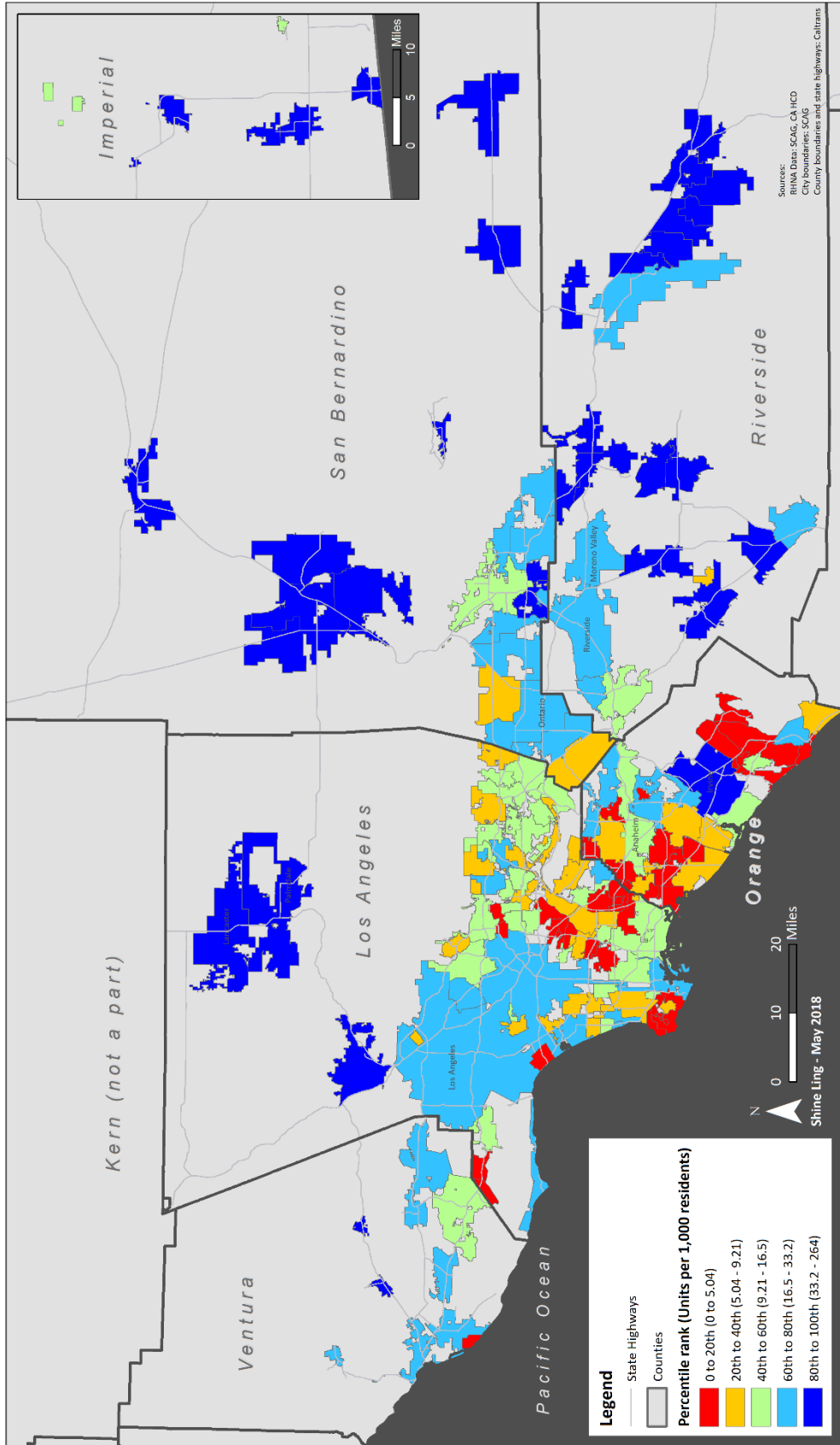
Los Angeles metro area



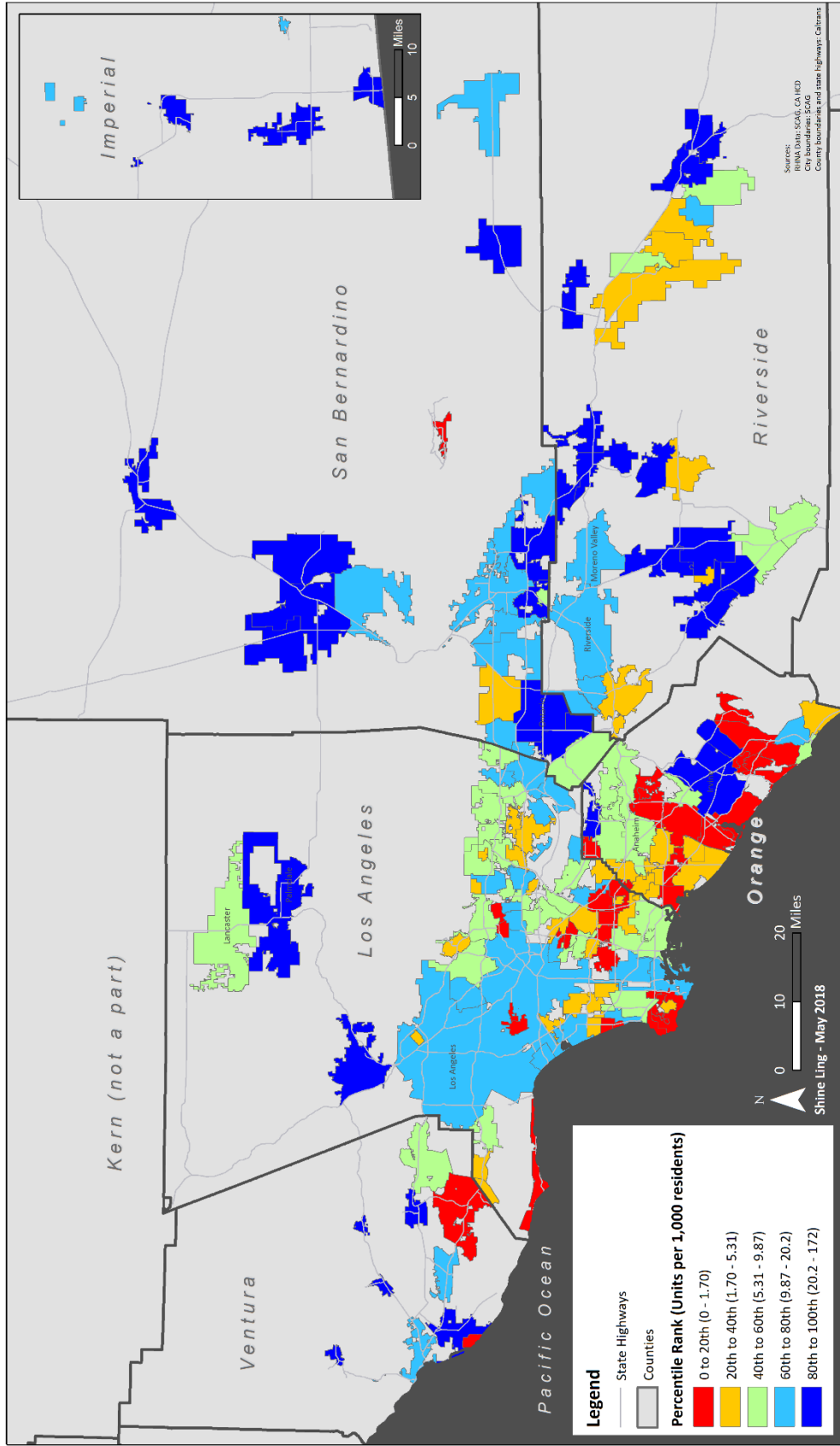
RHNA Allocations per Capita (affordable units) - 3rd Cycle (1997-2005)



RHNA Allocations per Capita (affordable units) - 4th Cycle (2005-2013)

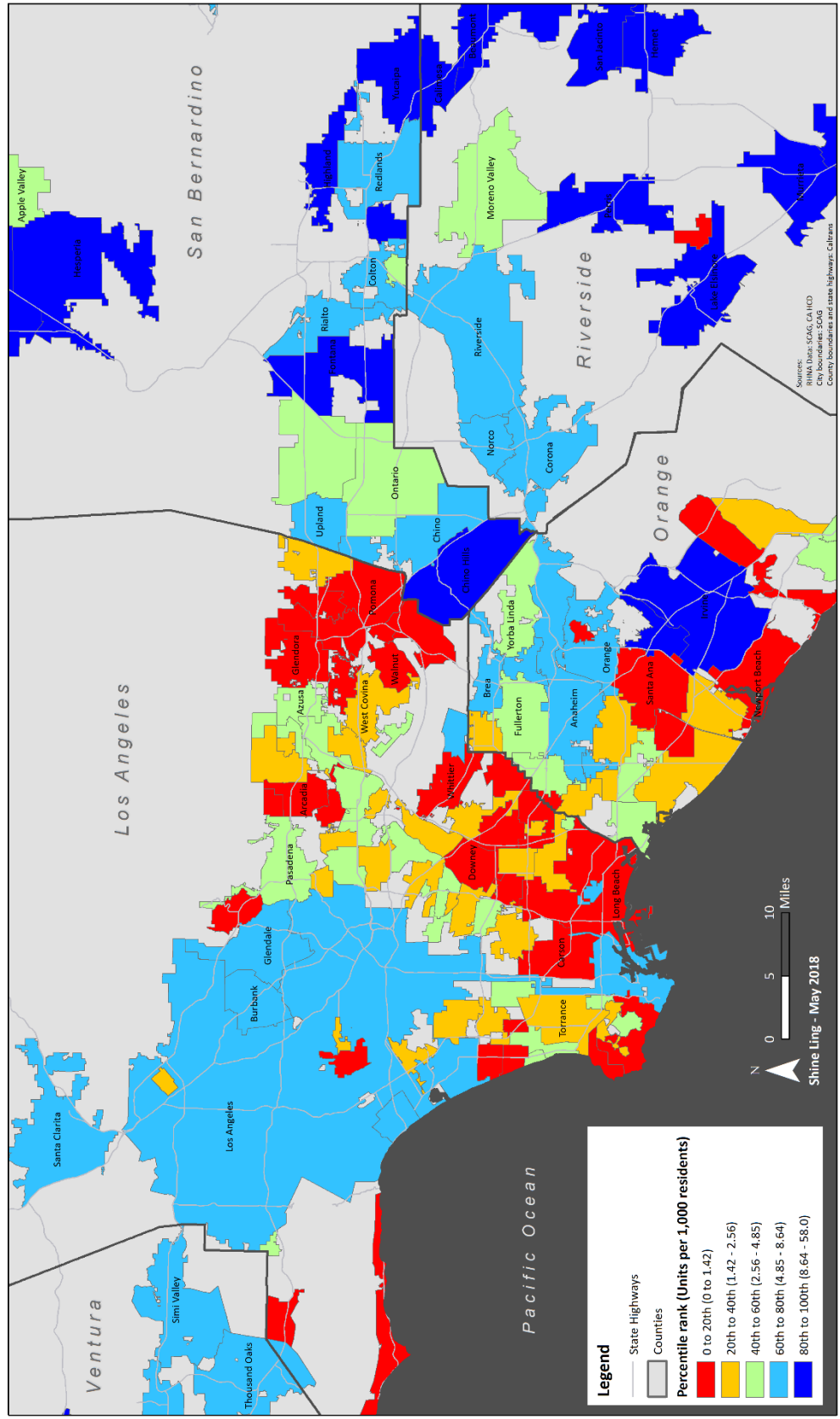


RHNA Allocations per Capita (affordable units) - 5th Cycle (2013-2021)

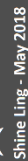


RHNA Allocations per Capita (affordable units) - 3rd Cycle (1997-2005)

Los Angeles metro area

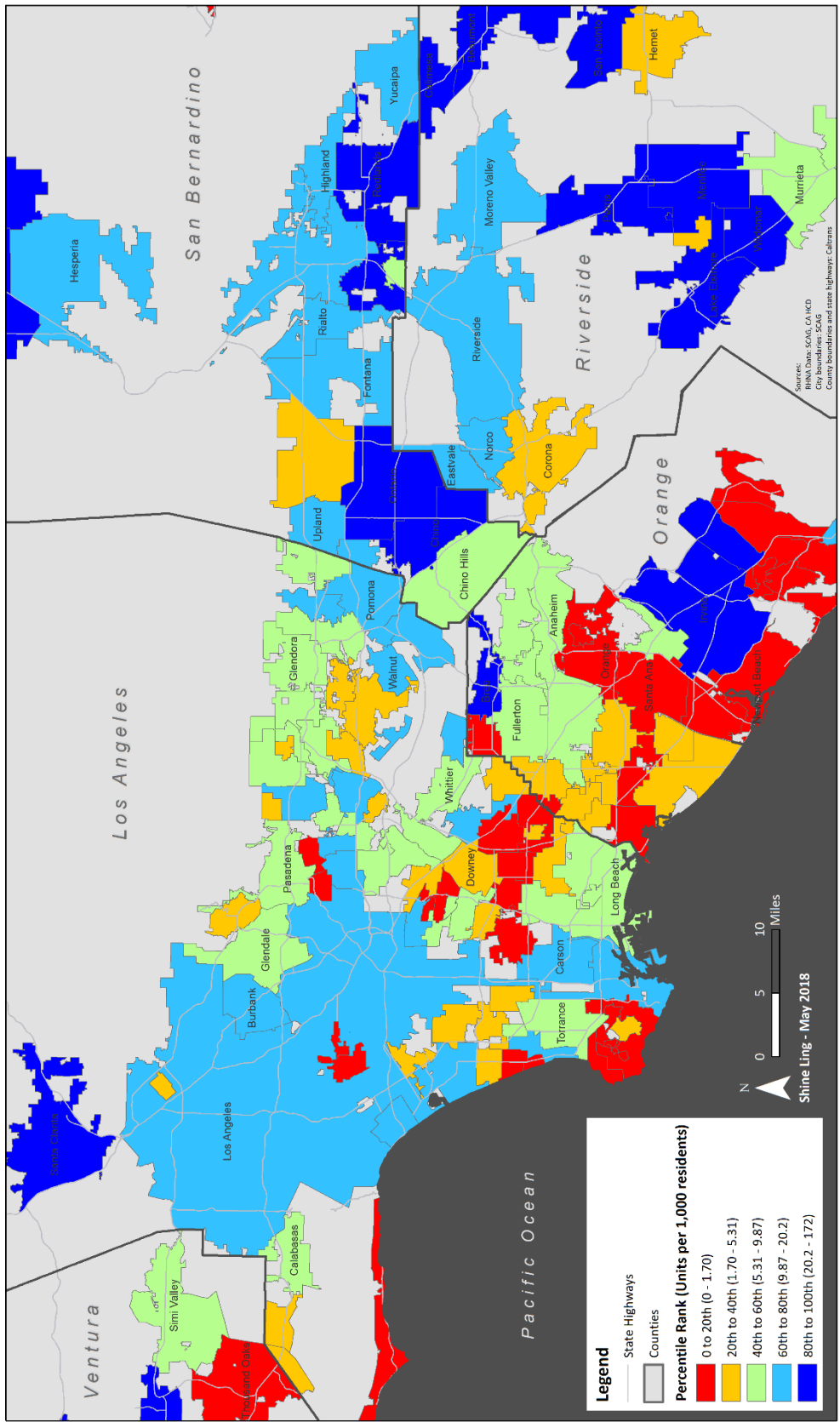


Los Angeles metro area



RHNA Allocations per Capita (affordable units) - 5th Cycle (2013-2021)

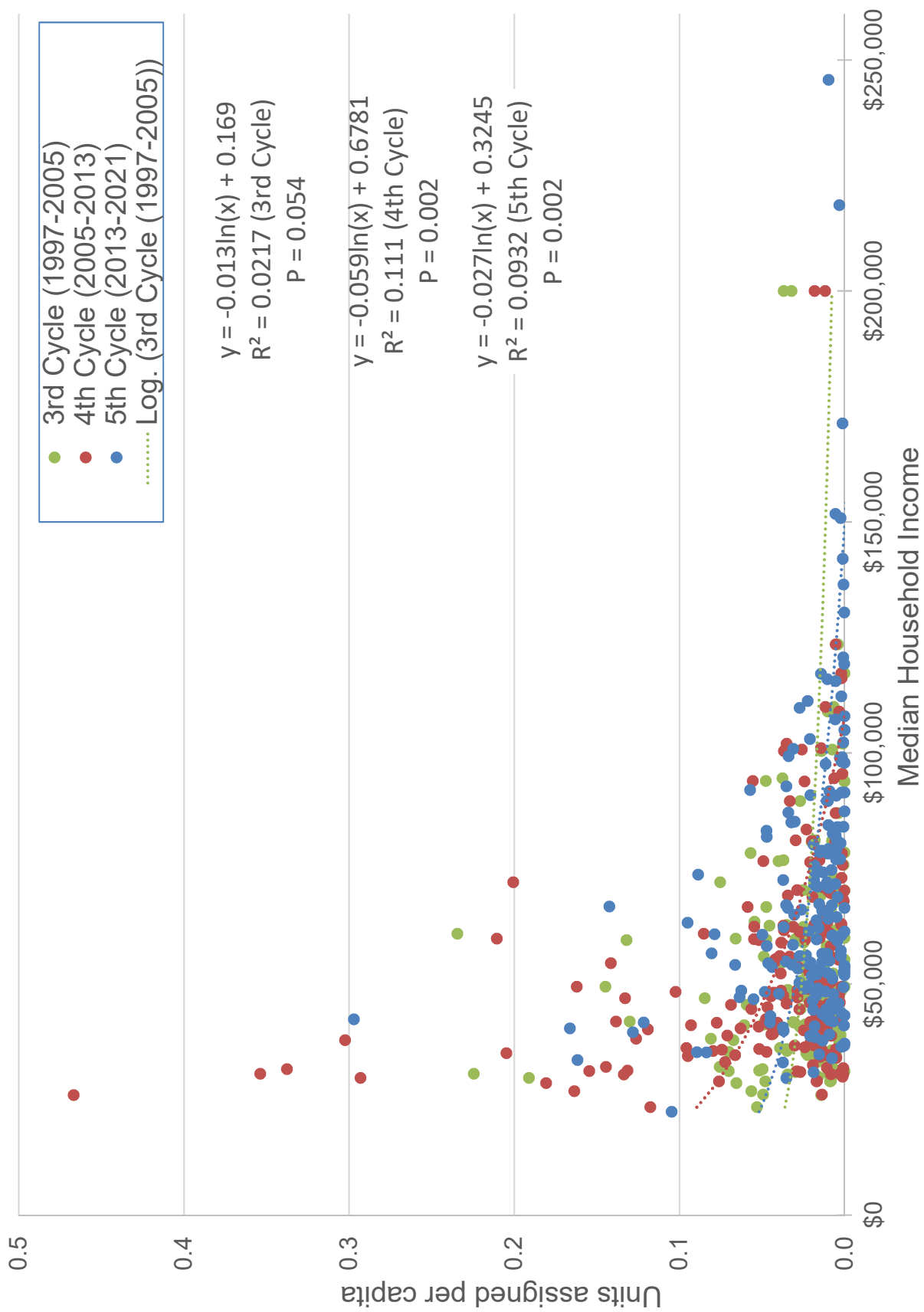
Los Angeles metro area



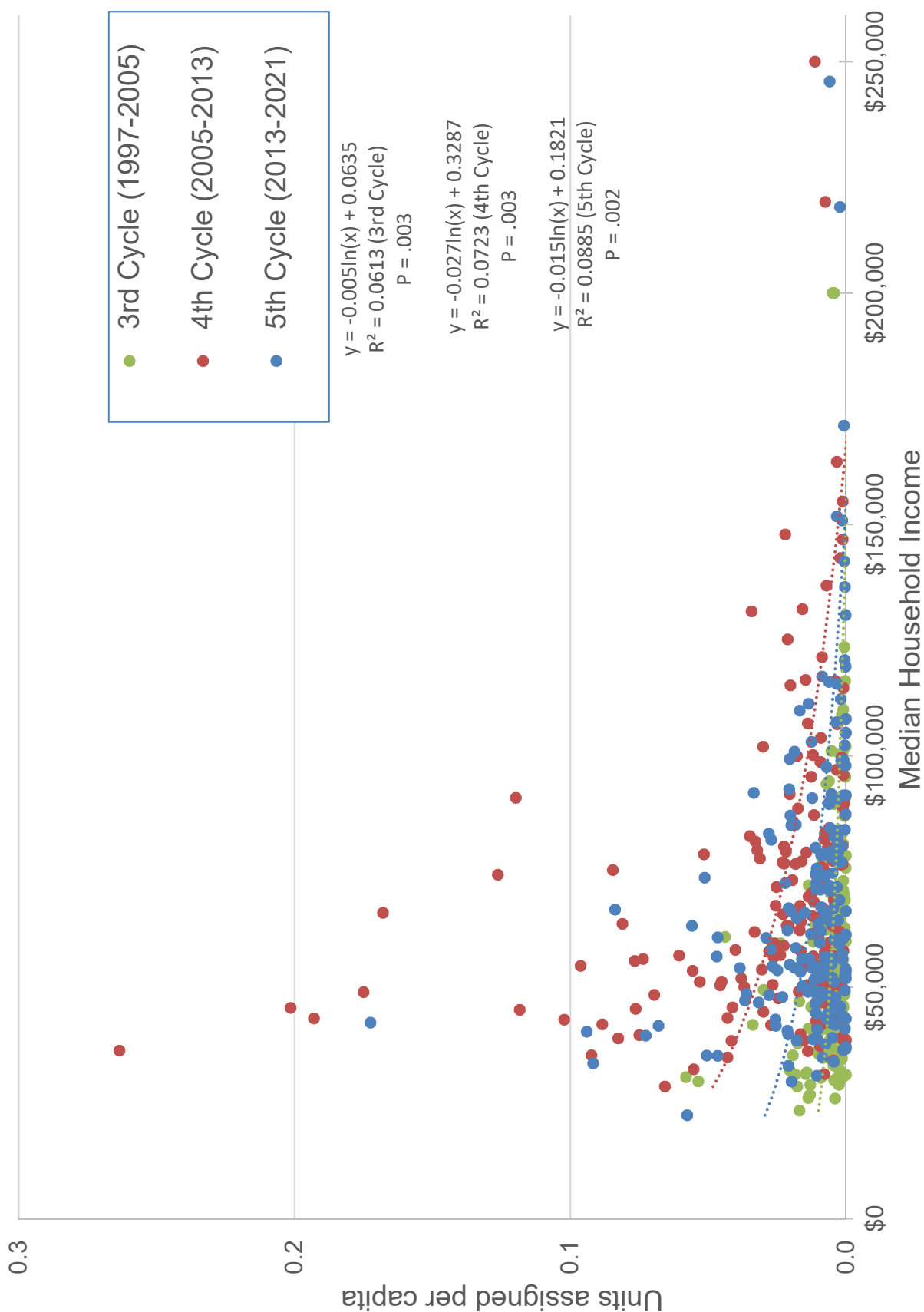
APPENDIX B

GRAPHS

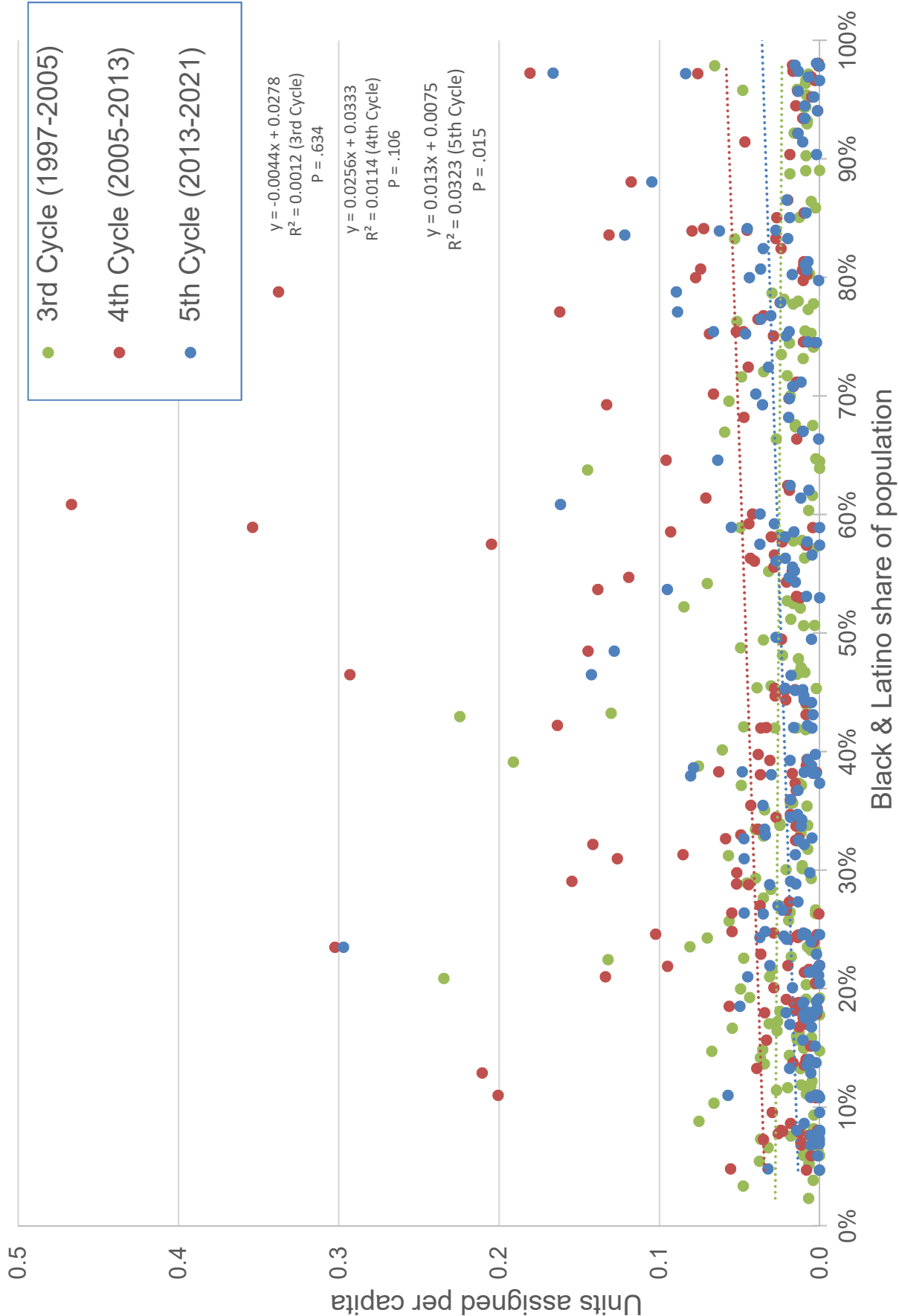
Total RHNA Allocation by Income



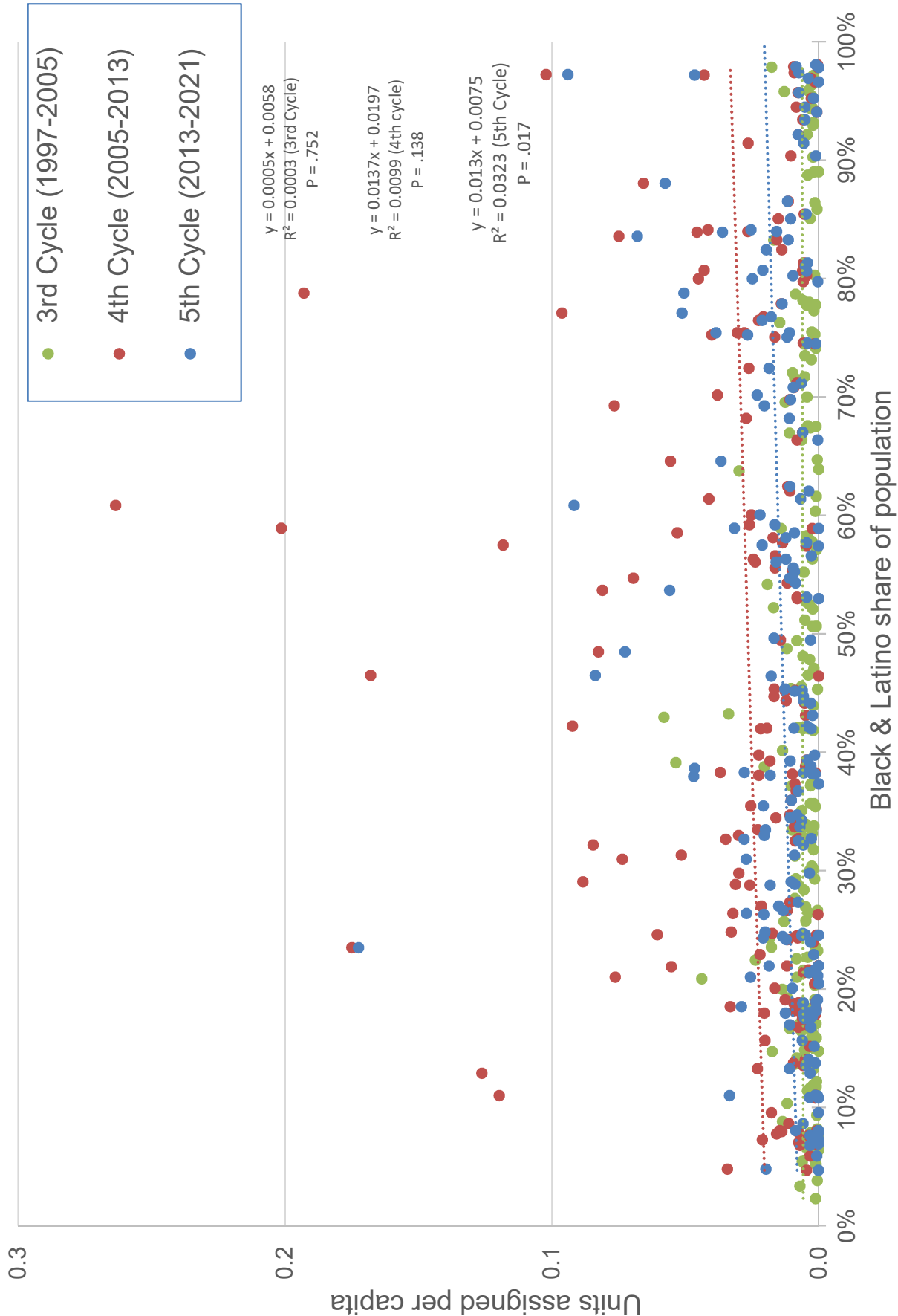
Affordable RHNA Allocation by Income



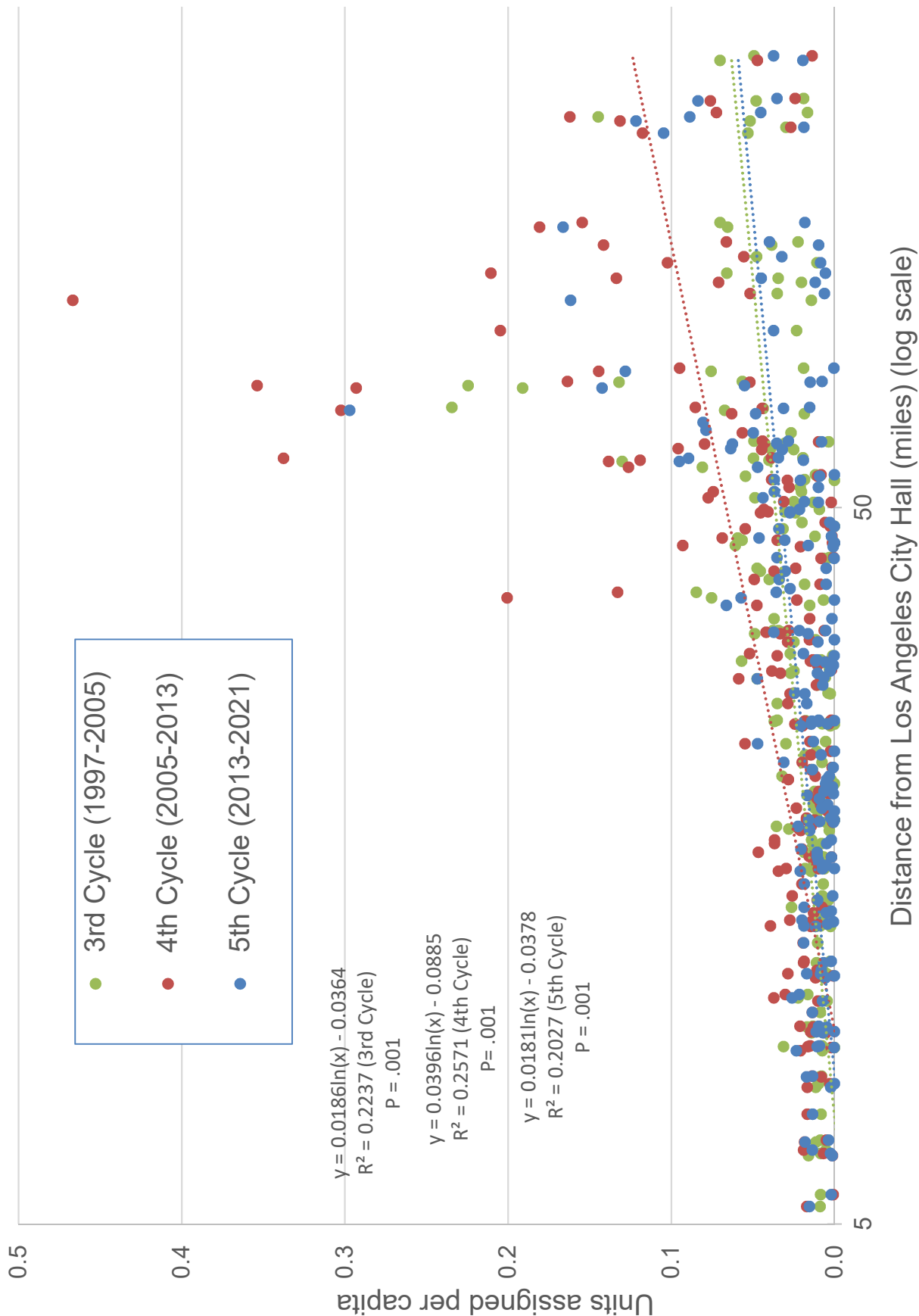
Total RHNA Allocation by Race



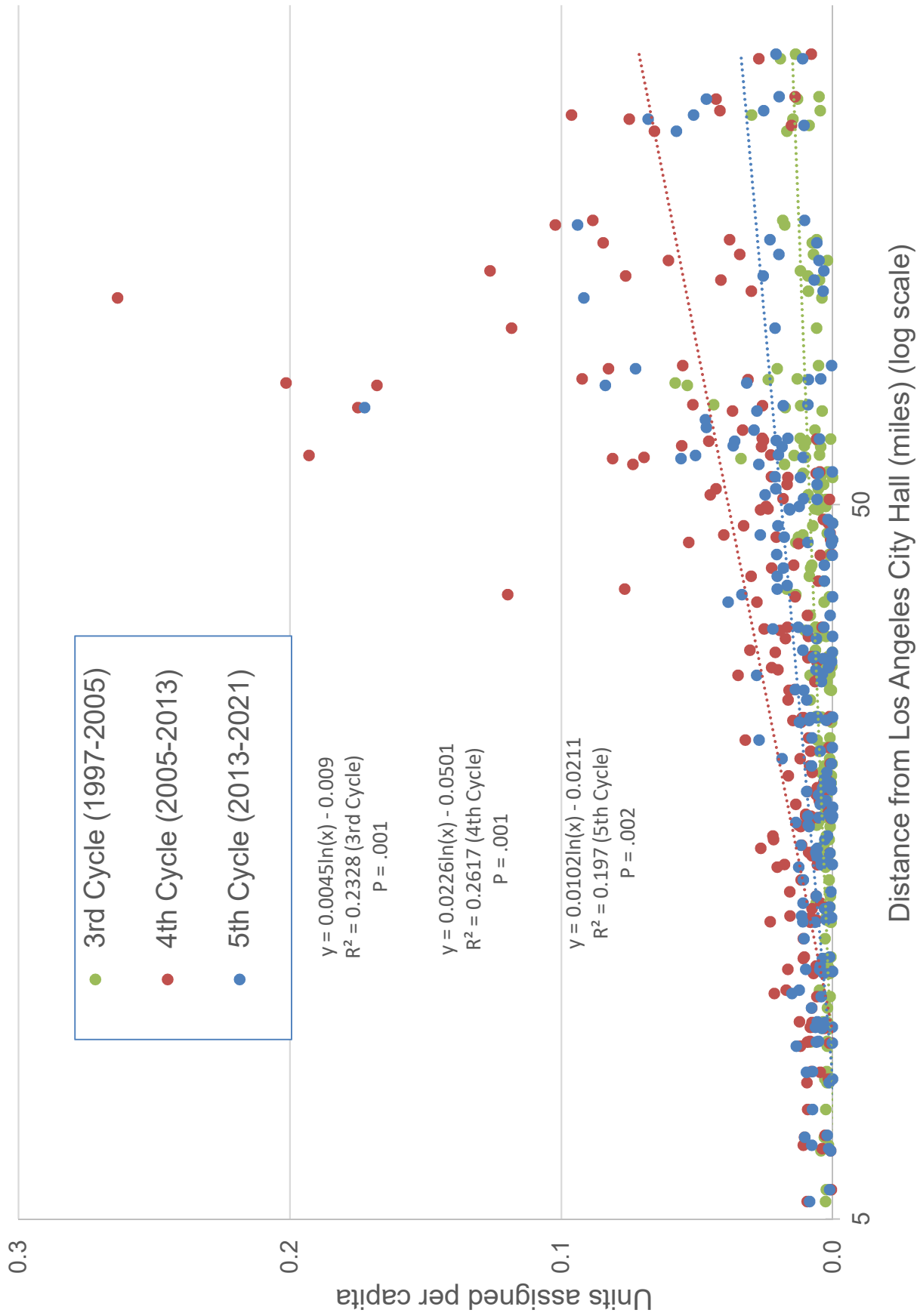
Affordable RHNA Allocation by Race



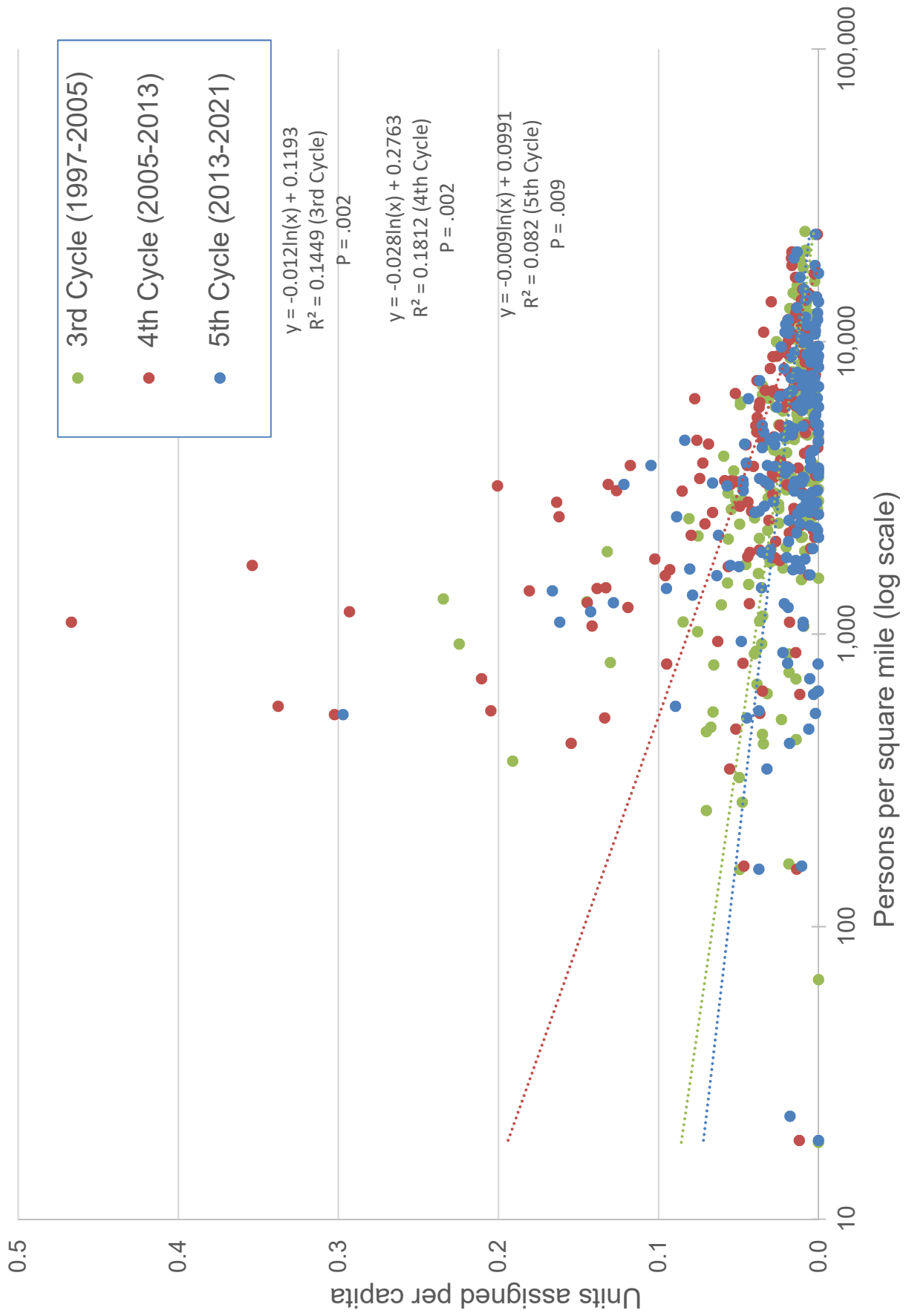
Total RHNA Allocation by Distance to Los Angeles



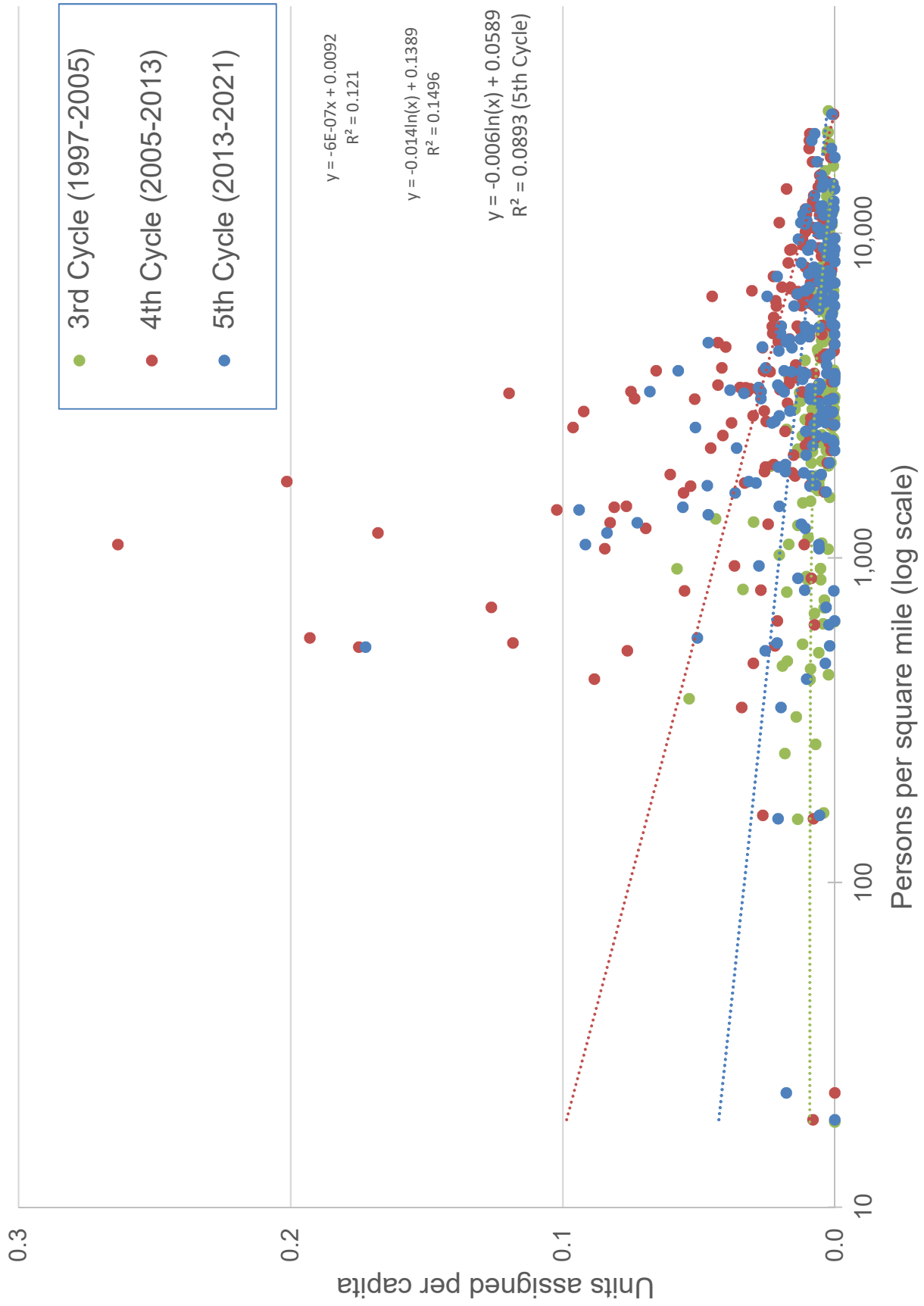
Affordable RHNA Allocation by Distance to Los Angeles



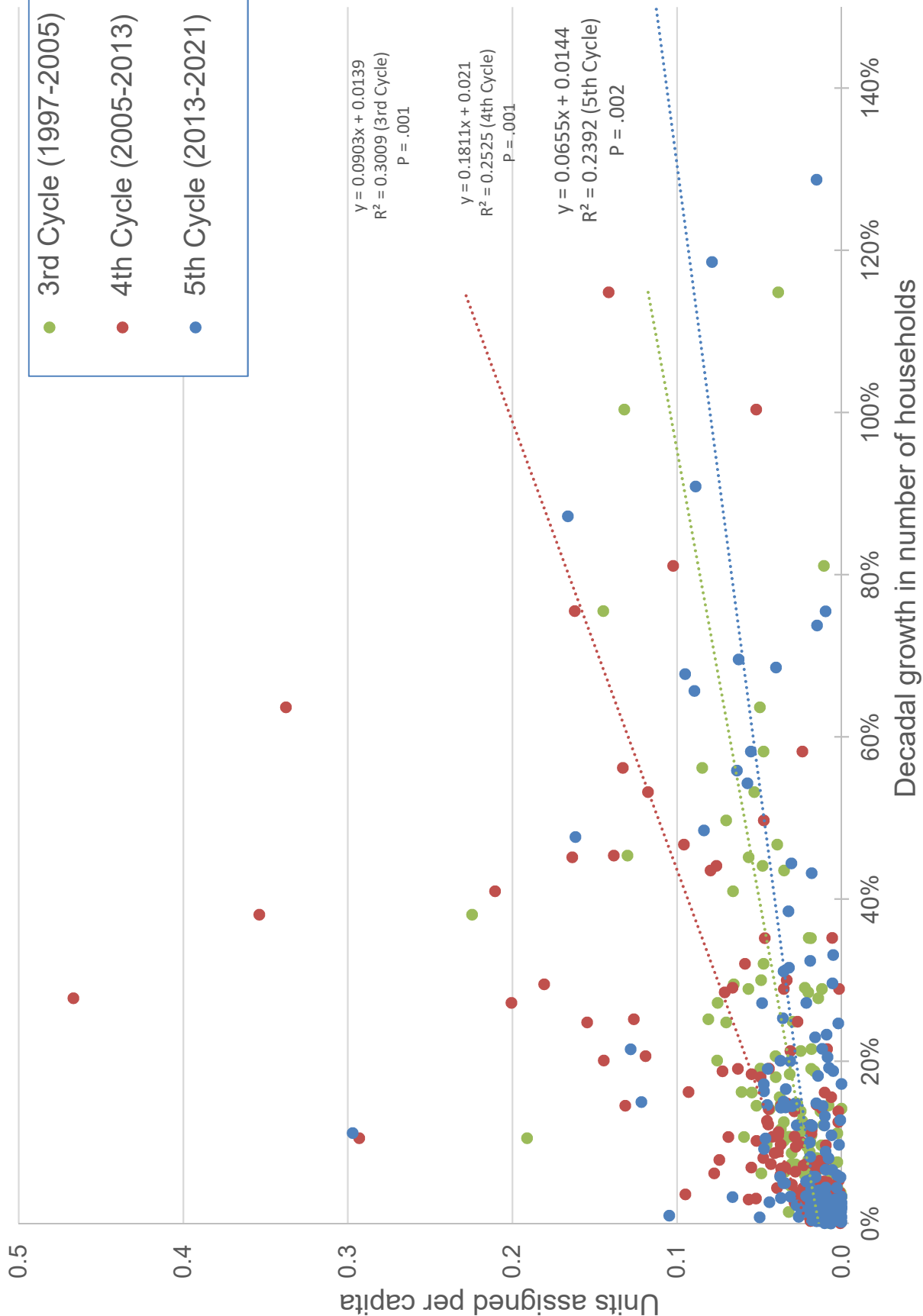
Total RHNA Allocation by Population Density



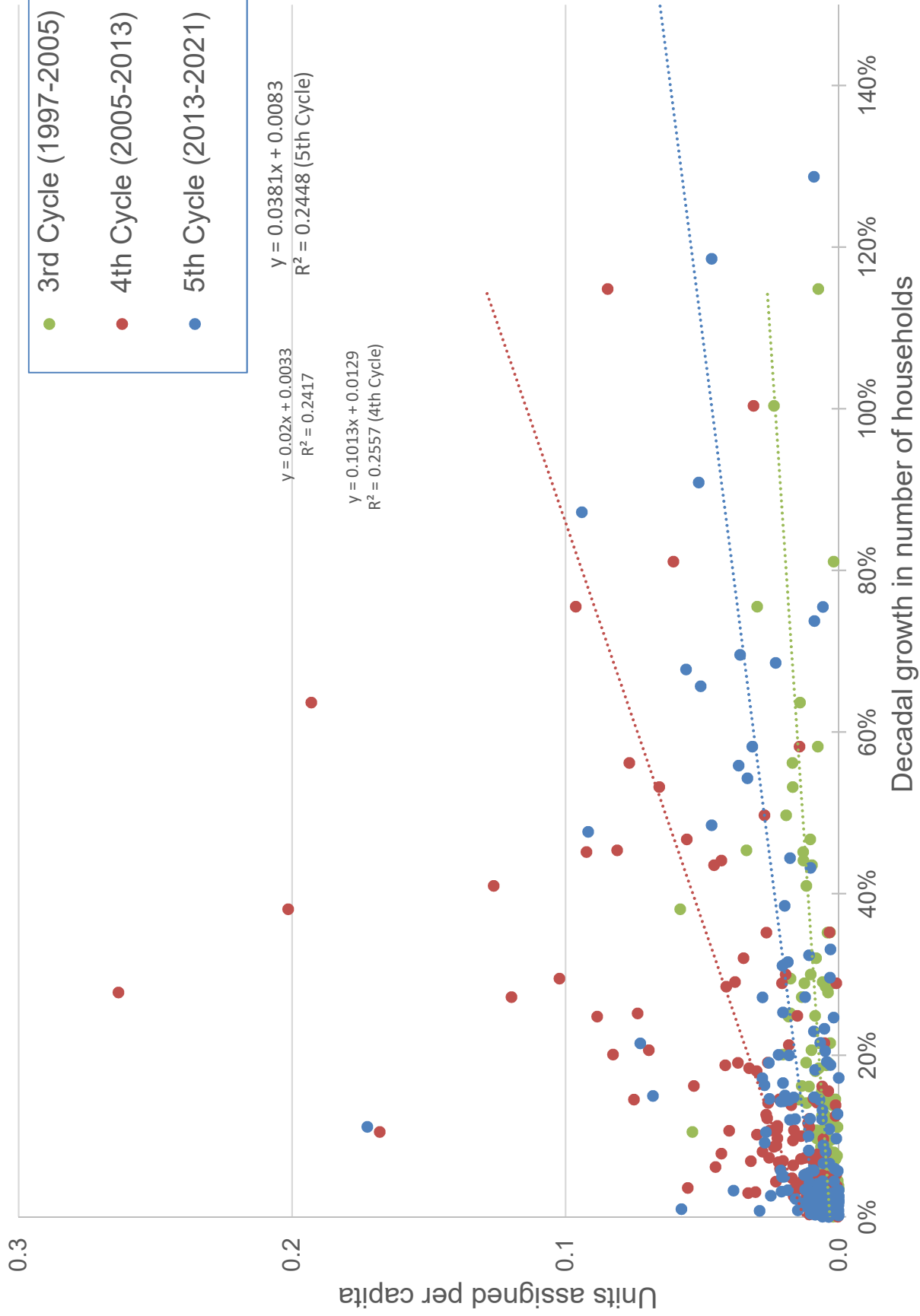
Affordable RHNA Allocation by Population Density



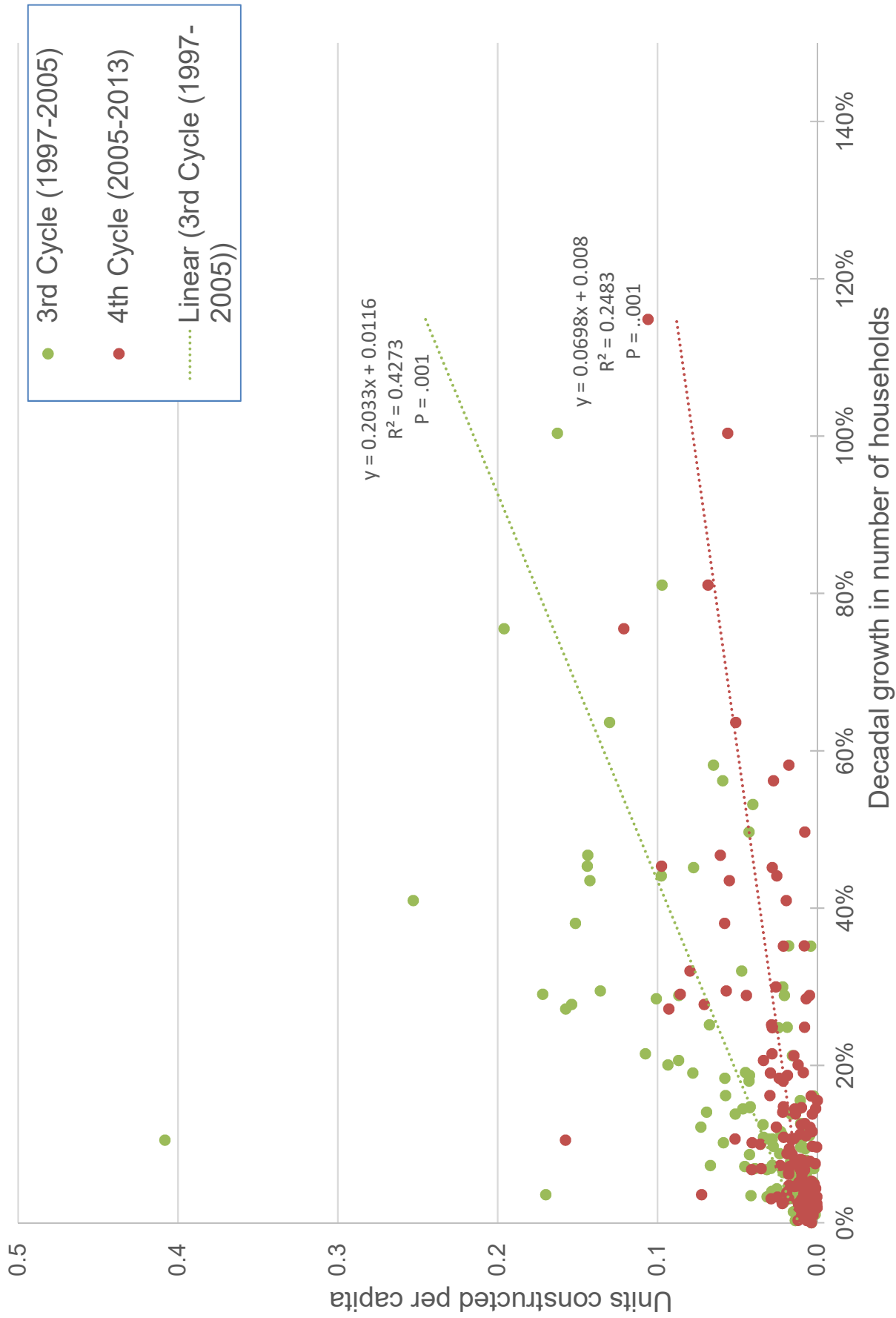
Total RHNA Allocation by Household Growth



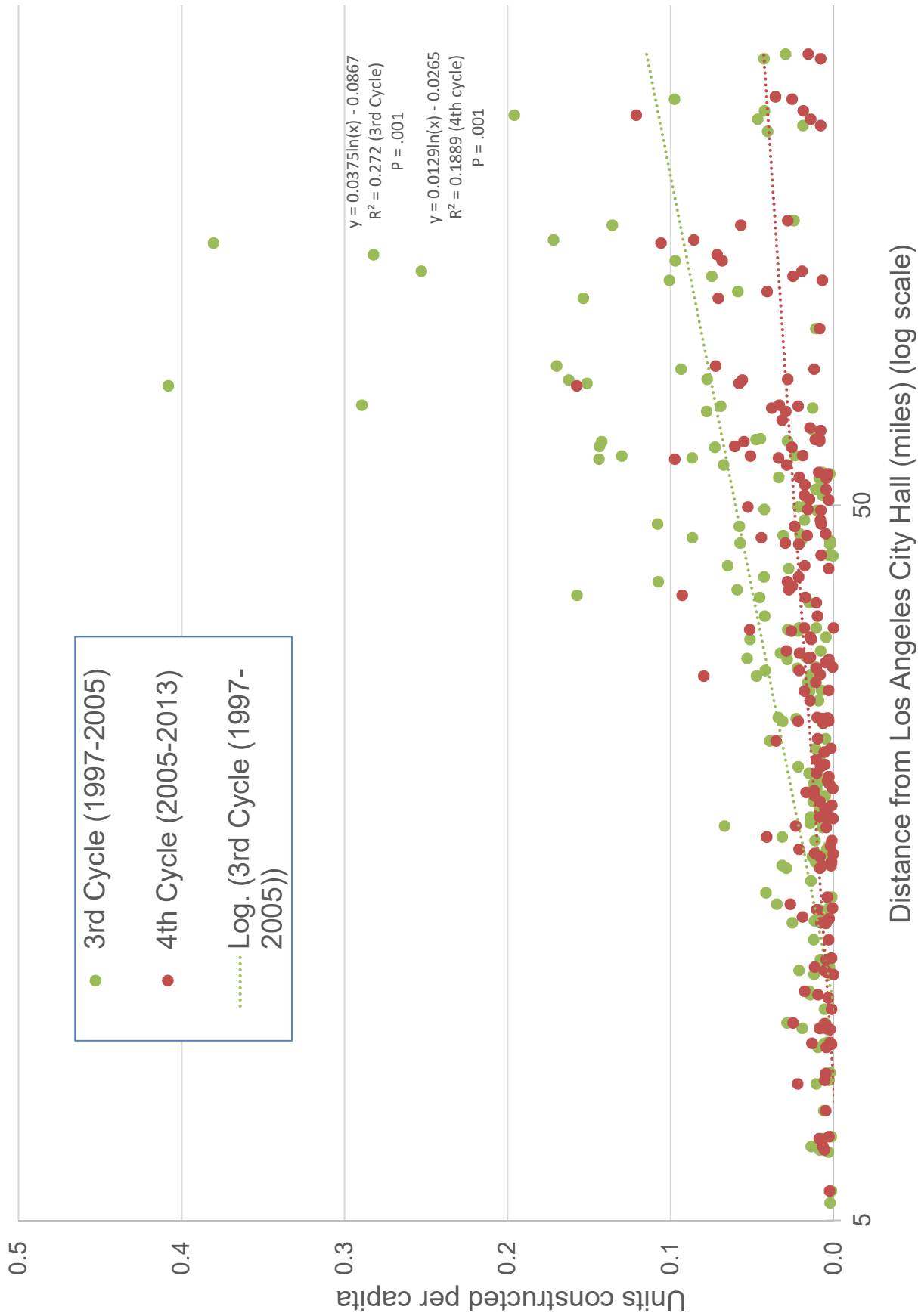
Affordable RHNA Allocation by Household Growth



Total Construction by Household Growth



Total Construction by Distance to Los Angeles



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